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A GENERAL VIEW
OF THE
AGRICULTURE
OF THE
EAST-RIDING OF YORKSHIRE;

PUBLISHED BY ORDER OF

THE BOARD OF AGRICULTURE.

BY H. E. STRICKLAND,

OF RIGHTON, ESQ.

———" Only let men awake, and perpetually fix their eyes, one while on the nature of things; another while on the application of them to the use and service of mankind."

———" We give this advice, touching experiments of this nature; that no man be discouraged, or confounded, if the experiments which he puts in practice answer not his expectation; for what succeeds pleaseth more, but what succeeds not, many times informs no less."

LORD BACON.

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INTRODUCTION.

In submitting the following pages to the Board of Agriculture and the Public, the Author trusts that due allowance will be made for their defects, on account of the great variety of subjects necessarily comprehended in a work of this nature, and the difficulty of obtaining satisfactory information upon points in which his own experience has been deficient. He has indeed employed all the means of elucidation, which his own experience and practical knowledge could supply; but he has to regret not only the scantiness of communications in general, but that many who were individually applied to, from a fear probably of committing themselves, have shown an unwillingness to afford specific information.

He would be deficient, however, in gratitude to a few friends, who, feeling an interest in their county's welfare, and an anxious desire to promote the public good, have kindly lent him their assistance, were he here to omit naming his brother Sir William Strickland, Bart., Sir Henry Vavasour, Bart., R. C. Broadley, Esq. Charles Howard, Esq. The Rev. Francis Wrangham, Mr. John Lee, Mr. Tuke, and Mr. Stickney.

To theſe and some others, who have obligingly given him their opinions and assistance, he desires to render his best acknowledgments.

In drawing up his Survey, he has noticed many things, which to persons acquainted with the customs and practice of the Riding, may appear unworthy of regard; but the plan of the work having been laid down by the Honourable Board, the Author conceived himself bound to abide by it, and has therefore scrupulously adhered to statements of facts, avoiding, as much as possible, the introduction of mere theory and hypothesis.

Some farther particulars, notwithstanding, would have been added, had they not already been noticed in the excellent Survey of the North-Riding. A strong similarity must indeed necessarily prevail in many instances, between contiguous districts.

Righton, near Bridlington,
June, 1812.

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the S. it is divided by the Humber from the County of Lincoln.

The longest lines which can be drawn at right angles across the Riding, extend from south-west to north-east 42 miles, and from south-east to north-west 52 miles. It contains about 1280 square miles, or 819,200 acres, of which not more than about 4000 acres can be regarded as uncultivated, or in a state of waste.

SECT. II.—DIVISIONS.

THIS Riding is divided into six Wapontakes, viz. Holderness, Dickering, Buckrose, Ouse and Derwent, Howdenshire, and Harthill. But for the more convenient administration of justice, it is subdivided into the Chief Constableries, of Dickering, Buckrose, Holme Beacon, Bainton Beacon, Wilton Beacon, Hunsley Beacon, Ouse and Derwent, Howdenshire, and the North, Middle, and South Bailiwicks of Holderness. Here also may properly be added, as coming within the geographical, though not the civil division of the East-Riding, the jurisdiction of the County of the Town of Kingston upon Hull, extending over a few parishes in the neighbourhood of that place. It contains ten market-towns, viz. Bridlington, Driffield, Beverley, Pocklington, Market-Weighton, Howden, South Cave, Kingston upon Hull, Hedon, and Pattrington; of which Beverley, Hedon, and Hull, send two members each to parliament. Hornsea, Hunmanby, Frodingham, and Kilham, have also the right to markets; but none have been held in them during many years. The first held it's market on Monday, Hunmanby on Tuesday, Frodingham on Thursday, and Kilham on Saturday.

The natural divisions of this Riding are four, which will be found to distinguish with sufficient, though perhaps not with absolute accuracy, the chief peculiarities of it's soil and surface, viz.

The Wolds, or the chalk lands.

Holderness, or the clay lands.

Howdenshire, with Ouse and Derwent, being chiefly sandland, with some warp land, clay, and loam.

The Vale of Derwent, round the north and west foot of the Wolds, consisting of various soils.

The above divisions have been formed, as much as possible, with reference to the circumstances of the soil; in which, as well as in the climate and produce, they will be found to vary considerably from each other.

SECT. III.—CLIMATE.

THE climate of the Wolds, in consequence of their great elevation, their general uniformity of surface, and their almost total want of wood and shelter, is severe and variable; the winds, as they sweep over this plain and unbroken surface, being extremely violent and penetrating, and by promoting a rapid evaporation, greatly aggravate the cold of the climate, particularly the south-west wind in the autumn, and the north and north-east winds in the winter and spring. These last frequently continue with little intermission throughout the whole of March, April, and May, and occasionally still longer, retarding all vegetation at this critical period of the year, and dwarfing the hedges and trees subject to their influence. But notwithstanding these apparently unfavourable circumstances, the Wolds are extremely healthy, as is sufficiently demonstrated by the inhabitants being in a great degree exempt from epidemic and local diseases, and by the vigorous longevity to which they frequently attain. Heat and cold, indeed, as indicated by the thermometer, depend principally upon the elevation; but situation and soil materially influence the climate and produce; as shelter, aided by a calcareous and naturally warm soil, is universally found greatly to increase the quantity of herbage, and the quality of the grain; and evince that the soil wants only climate and shelter to render it much more productive than it is at present. In proof of this, the most abundant produce of grain, and of the best quality, always occurs in the driest summers; *no season is too dry for it:* there appears always to be sufficient moisture for the grain, exhaling from the chalk, which lies every where very near the surface, in many cases not more than a few inches below it; and, though the pasturage in such dry summers may apparently suffer, the injury is always over-rated, as the sheep and cattle at such seasons are invariably in good health, and in better condition than might naturally be expected from the parched prospect which the country presents.

The sea-fogs also, to which the northern and eastern parts of the Wolds are frequently exposed in the summer and autumn, and the great elevation of the district in general, render the Wolds peculiarly unfavourable to the growth of wheat, the crops of which are usually small, and the grain thick-skinned and coarse.

Holderness, being sheltered by the Wolds on the north and west, having a fertile soil, and a surface undulating in gentle swells, is admirably adapted to the produce of corn on its northern and western extremities, while the flat rich pastures adjoining to the Humber and the sea are equally calculated for grazing; the climate is in general healthy, though in some of the lower parts of it, and in the lately, or yet imperfectly drained tracts on each bank of the river Hull, a stranger is still liable to the ague in the first winters which he passes there. This clayland district being little elevated above the sea, (no part of it being perhaps more than fifty feet above high water mark,) and being bounded by the sea for the greater part of it's circumference, is not liable to any long continuance of frost or snow; the climate may therefore be pronounced as mild as the latitude will allow of, though exposed necessarily to the severity of the easterly winds in the spring.

Howdenshire with Ouse and Derwent, in which district is comprehended all the country lying to the south of the Weighton and York road, and west of the Weighton and South-Cave road, being situated far inland, and completely sheltered by the Wolds from the north-east, enjoys an earlier vegetation in proportion to the quality of the soil, and a more temperate climate than the claylands, although the frost and snow continue much longer in the winter at this distance from the sea, than in it's more immediate vicinity.

The Vale of Derwent, from it's variety of soil and exposure, is proportionally various in it's climate. The western part is in all respects healthy, temperate, fruitful, and agreeable; but the northern is exposed alike to the pining winds of the east, and the boisterous gales of the west; is liable to the sea-fogs in summer and autumn, and till of late years (during which an effectual drainage has taken place) was subject to unwholesome exhalations from the bogs on each side of the Derwent at all seasons of the year. Immediately to the south of it the Wolds rise abruptly to the height of several hundred feet, depriving it in the winter of a considerable portion of the sun's enlivening influence; and the southerly winds reach it only after having traversed the bleak and elevated tract of the Wolds; it is exposed also to all the winds from the eastern moorlands which lie as near to it on the north as the Wolds on the south; this part of the Vale therefore is in point of climate by no means favourable circumstanced.

From the following register, which has been kept with great attention by R. C. Broadley, Esq., at Ferriby, near Hull, for the purpose of ascertaining the quantity of rain, it appears that the annual average at that place for eleven years, ending with the year 1809, is 27.32 inches, which somewhat exceeds the average of the kingdom; but from the vicinity of this place to the Humber, it may probably receive a greater proportion of rain than the more northern parts of the Riding; as the thunder-storms and heavy clouds may be attracted by that great river, and drawn down it's course toward the sea.

	1799.	1800.	1801.	1802.	1803.	1804.	1805.	1806.	1807.	1808	1809.	Aver.	
Jan. ...	1.14	3.59	1.42	1.77	1.50	3.71	2.57	3.74	0.82	0.59	1.57	2.03	Average of the first six months 1.85.
Feb. ...	3.06	0.30	1.39	2.77	1.71	1.95	1.89	2.33	2.64	0.92	2.94	2.08	
March	2.48	1.45	3.06	0.02	2.41	3.09	1.25	3,51	1.21	0.29	0.48	1.74	
April...	2.22	3.83	0.73	1.08	1.46	2.11	2.10	0.89	1.77	2.47	3.05	1.97	
May ...	2.44	1.77	2.36	1.39	0.94	1.77	2.74	1.38	2.53	2.01	0.45	1.78	
June ...	0.58	1.24	0.47	1.90	2.44	1.91	1.52	1.50	1.13	1.21	3.24	1.55	
July ...	2.47	0.01	3.63	2.78	1.97	2.61	1.49	3.52	1.11	3.24	2.38	2.29	Average of the last six months 2.71.
August	5.09	3.00	0.76	4.29	1.82	2.02	3.04	2.78	3.31	2.44	5.88	3.13	
Sept....	5.80	5.75	4.87	0.51	0.89	0.06	2.24	2.49	2.86	3.27	3.10	2.89	
Oct. ...	2.96	1.82	1.81	2.92	2.24	3.70	1 93	1.22	1.93	2.99	0.56	2.18	
Nov....	0.73	4.63	2.37	2.29	2.50	2.08	0.78	4.31	6.02	2.51	1.90	2.83	
Dec. ...	1.33	2.09	3.34	2.20	6.70	1.70	3.03	3.20	1.62	5.01	2.42	2.96	
	30.30	29.48	26.21	23 92	26.58	26.71	24.58	30.87	26.95	26.95	27.97	27.32	

This table shows that nearly half as much more rain falls in the last six months as in the first six months of the year; and that the average of each month in each half year, throughout those eleven years, is remarkably uniform in quantity.

The following tables being the result of observations taken with all due attention, the one at York, being the western extremity of the East-Riding, and distant from the coast about 40 miles, the other at Righton, immediately on the coast, show the state of the thermometer and barometer, at each place during the year 1805. The barometer at York, was placed not many feet, (perhaps about 30,) above high tide in the river there; the thermometer also being at the extremity of the town toward the east, was consequently in a favourable situation for making observations, as not being affected by the atmosphere of the town. It was placed against a wall in an aspect open to the N. and N. E., and about 12 feet from the ground. Equally favourable circumstances attended the observations at Righton, but very different in point of situation, the thermometer being so placed as to be within the influence of the sea, and open to it, and at an elevation of about 400 feet above half tide, being distant from the shore, by the descent, about a mile.

YORK.	THERMOMETER.						BAROMETER.		
	8 A. M.			½ P 2 P. M.					
1805.	High.	Low.	Mean	High.	Low.	Mean	Highest	Lowest	Mean
January	48	29	33½	45	32	36¾	30,3	28,8	29,5
February	48	26	37	52	31	41¼	30,3	28,9	29,6
March	51	33	41½	60	38	48½	30,3	29.2	29,7
April	55	38	46¾	63	39	53	30,3	29,5	29,9
May	62	42	51½	73	47	57¼	30,3	29,2	29,7
June	65	50	58	74	55	62¾	30,5	29,4	29,9
July	70	54	62¼	78	60	68½	30.3	29.3	29,8
August	67	57	63¼	76	64	69¾	30,3	29,4	29 8
September ...	66	48	59	74	58	66	30,7	29,3	30,0
October	58	32	46	63	42	53	30,5	29,4	29,9
November ...	48	25	37½	52	37	45	30,8	29,1	29,9
December ...	52	21	37½	57	31	41½	30,4	28,8	29,6
General average.....			47¾			53½			29 8
Average of morning and afternoon						50¼			

RIGHTON.	THERMOMETER.						BAROMETER.		
	8 A. M.			2 P. M.					
1805.	High	Low.	Mean	High	Low.	Mean	Highest	Lowest	Mean
January	46	30	35	42	33	37	29,80	28,39	29,09
February......	47	31	36	50	34	40	29,77	28,80	29,28
March	52	31	39	56	35	43	29,80	29,20	29,5
April...........	54	34	45	58	38	48	29,90	28,97	29,23
May.............	68	42	50	69	41	50	29,80	28,68	29,24
June	68	50	59	69	50	58	29,94	28,93	29,43
July.............	72	53	62	78	55	63	29,78	28,87	29,32
August	69	55	60	71	58	65	29,78	29,16	29,47
September ...	62	46	55	72	50	63	30,16	28,85	29,5
October	54	36	46	64	44	53	30,08	28,99	29,53
November ...	44	32	39	54	36	44	30,30	28,76	29,33
December ...	42	31	37	52	35	45	29,67	28,78	29,22
General average ...			47			50¾			29,36
Average of morning and afternoon						48¼			

From these tables, and the observations at large from whence they were taken, it appears, that the greatest height of the thermometer in the year 1805 at York was 78° in July, and the greatest height at Righton 78° also on the fifth of the same month;—and the least height at York 29° in January at 8 A. M. and at Righton 30° at the same hour on January the ninth;—and the least height observed at any time during the year at York 23° on January 9, at 11 P. M.;—that the mean of morning and afternoon of the whole year was at York 50° ¾, at Righton 48° ¾;—that the mean of the whole year at 8 A. M. at York was 47° ¾, at Righton 47°;—of the whole year in the afternoon at York 53° ½, at Righton 50° ¾;—that the mean height of the six winter months at York was, at 8 A. M. 38° ⅚, in the afternoon, 44° ½; and at Righton at 8 A. M. 38° ⅔, in the afternoon, 43° ⅔;—that the mean height of the six summer months at York was, at 8 A. M. 57° ¼, in the afternoon, 62° $\frac{1}{2}$; and at Righton, at 8 A. M. 55° $\frac{1}{6}$, in the afternoon, 57° $\frac{5}{6}$;—that the mean of morning and evening during the six winter months was, at York, 41° $\frac{3}{6}$, at Righton, 41° $\frac{1}{6}$; of the six summer months at York 59° $\frac{5}{6}$, at Righton 56° $\frac{3}{6}$.

But the circumstance most worthy of notice in these tables, is the effect which the sea has in equalizing the temperature of the atmosphere. Righton, situated at about 400 feet above the sea, and in a situation so exposed, would undoubtedly be much colder than the immediate neighbourhood of it situated upon a level with the sea, and ought also to be much colder than York, situated so nearly upon the level of the coast; but instead of that we find that the sea, moderating the climate at all seasons, and, when cold, adding to the warmth of it, leaves a difference against the warmth of Righton of only $\frac{3}{4}$ of a degree of the thermometer, at eight in the morning, throughout the year; and during the six winter months, at the same hour, a difference of only $\frac{1}{6}$ of a degree; and in the mean of morning and evening, during the winter months, only $\frac{1}{3}$ of a degree; whereas, in the warmer parts of the day and of the year, the difference of the temperature in the afternoon, throughout the year, is 2$\frac{3}{4}$ degrees, and during the six summer months, at the same period, rather more than 4°—because, in proportion as the land is warmer than the sea, a constant and stronger breeze is drawn to it from the sea; and when the land is colder than the sea, the effect of the latter is constantly to warm the air upon the former, but not to extend it's influence far within land. No doubt, had observations been taken in the neighbourhood of the sea, and tolerably upon a level with it, it would have been found that the climate, without being much colder in warm weather, was very considerably warmer in cold weather, than farther inland; the fact, indeed, has usually been taken for granted, but the amount never ascertained; the above may therefore be a step toward it.

From the above tables it also appears, that the greatest height of the barometer at York was 30,8 in November, and the lowest 28,8 in January and December;—and the lowest mean of a month 29,5 in January;—and the mean of the year 29,8, having had a range of two inches in the course of the year. The greatest height of the barometer at Righton was 30,30 in November; and the lowest 28,28 in January;—and the lowest mean of a month was 29,09 in January; and the mean of the year 29,36, having had a range there of $2\frac{2}{100}$ inches; which different heights of the barometer at York and Righton uniformly, as nearly as may be, correspond with the different elevations of the two places.

From observations also, very accurately taken, of the prevailing winds at York, it appears that they blew from the westerly points, in the year 1805, 230 days, and from the easterly points 135; at Righton from the westerly points 198 days, and from the easterly 167 days; and though these latter observations were not taken as accurately as the former, in consequence of some days being omitted, for which certain allowances were obliged to be made, still there is reason to believe that any error cannot be great, and that they may be taken as a fair approximation, and therefore sufficient to prove the prevalence of the easterly winds on the coast; of winds that probably do not penetrate far inland, and are the principal cause of the milder state of the atmosphere there, in the colder months and times of the year, and the greater coolness of the hotter months and times as before stated; the easterly winds appearing to have prevailed in 1805, thirty-two days on the coast more than at York, and the westerly winds consequently as many days less.

SECT. IV.—SOIL AND SURFACE.

A LARGE portion of England is a chalk country, forming extensive downs, and producing excellent pasturage for sheep. Chalk forms the principal part of the southern coast of the island, lying at a greater or less depth from the surface, stretches through the central counties, and terminates at last in this Riding, on a bold and lofty front to the north. Beyond this, northward, there is no chalk in the island. The chalk is not more than half a mile in breadth where it crosses the river Humber, but expanding as it proceeds northward, it occupies from Flamborough Head, westward, an extent of about 27 miles, and from north to south upward of 30 miles. This district has great uniformity in its general character. The northern and western fronts are towering and precipitous, from which it gradually and insensibly sinks into the low country of Holderness; the surface of the country everywhere, and the strata generally, of which it is formed, dipping to the S. E. It may in general be said to have a moderately waving surface, intersected with numerous deep, narrow, winding valleys. That this is a proper description is evinced by the circumstance of the roads, in the natural state of the country, passing usually along it's summit, and not seeking a passage along the valleys, as is invariably the case in a mountainous country. The highest part of the Wolds appears to be on Garraby Hill, where their elevation is 792,180 feet above high tide at York[b]. The precise place where this measurement was taken by the barometer, is the summit of an ancient military rampart at the S. E. corner of the township of Garraby, adjoining to the high road from York to Bridlington. It is not improbable, that if the shore on the sea-coast had been taken for a base, the height might have been found somewhat greater; because a considerable accumulation of the water may probably take place in the long flow of the tide from the sea coast to York, a distance, by the course of the water, of not less than 90 miles.

At Flamborough Head they present a perpendicular front to the sea of about 14 miles in extent. Their highest part is at Speeton Beacon, which stands 442,905 feet above half tide[c], and which beacon stands on a mound, about 180 yards east of the boundary of the lordships of Righton and Speeton.

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[b] It has been observed in Mr. Tuke's Survey of the North-Riding, p. 4, that at an elevation of 800 feet no grain will ripen on the eastern moorlands, on those very hills which are in full view of this place; whereas upon this the highest summit of the Wolds, all kinds of grain come to maturity, and in due season, owing solely to the warmth of a calcareous soil. Barley grows here in great perfection, and is usually secured by the end of September, and other grain is as good as a light soil in such a situation and climate will permit. Upon the moorlands, where the soil is a cold tenacious clay on a gritstone rock, in it's natural state generally covered with peat, the crops will neither be so good or so certain at an elevation of 500 feet, as on the Wolds at 800 feet; a prodigious difference in favour of a calcareous soil, which holds good, and probably in the same proportion, at every elevation of the atmosphere.—W. S.

[c] All barometrical observations on the sea-shore, ought to be calculated

The soil of the Wolds is, with little variation, a light, friable, calcareous loam, from three to ten inches in depth, and on the hills covering a chalk rubble of a foot or a foot and a half thick, below which the chalk rock lies to an unknown depth[d]. In some instances this soil is mixed with flints, but they are few and small, compared with those in the southern chalk countries: in other situations a number of roundish grey pebbles are intermixed with the soil, which is then found of greater depth, and is stronger and more fertile in quality.

The soil of Holderness varies from a fertile clayey loam to a stiff, cold, retentive clay, with very little other variety throughout it's whole extent, except a narrow tract of gravelly loam extending two or three miles to the north and south of Rise, which is excellent turnep land. On the banks of the Humber, from Paul nearly to Spurn Point, there are thirteen or fourteen thousand acres of warp-land, of a strong clayey loam, the productiveness and fertility of which can hardly be equalled. The sediment forming this warp-land, being brought from the higher country by the numerous rivers and streams which open into this common estuary, is composed of a variety of substances. The moment the water reaches the low country,

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lated from *half-tide*, and not from high or low-water mark, because the first is invariable, but the two last vary, not only according to the moon's age, but still more half yearly at the equinoxes.—H. S.

[d] At Huggate, a well has been sunk in the chalk rock to the depth of 348 feet, without cutting through it, or meeting with any other substance, except occasionally a thin stratum of flint.—H. S.

country, (where, from the obstruction of the tide, it overflows it's banks,) it begins to deposit the mud and other substances with which it is loaded; the heaviest particles of course fall first, and in it's progress downward it continues to drop successively the heaviest which remain, till the fine impalpable silt is last deposited near it's outlet into the sea, where it is mixed with the clay brought in by the flowing tide from the abrasion of the coast. In exact proportion to the loss of the heavy warp, the land decreases in value; the sandy particles mixed with the rich mud, upon the lands first overflowed, form a fertile, gentle loam, which is easy of cultivation, and produces, when in tillage, the most luxuriant crops of wheat, beans, and turneps, and when in grass the finest grazing pastures; but lower down, where the warp is destitute of sand, it becomes extremely tenacious and adhesive, and though it does not lose much of it's fertility, involves an increased expense and difficulty of cultivation greatly reducing it's value.

The peculiarity of the circumstances and situation of Sunk Island, though it is properly included in the Holderness district, give it a claim to particular notice. It's name, though now inapplicable, it probably obtained from seamen, when it first began to show itself at ebb tide, a short time prior to the year 1667, as appears from the following extract from a book, entitled, Observations on the Land-Revenue of the Crown, 1787. "So lately as in the year 1667, a grant "was made by the Crown of a tract of sandy ground "in the river Humber, called the Great Sand, or "Sunk, (and now called Sunk Island,) to which no "man pretended title, and on which no beast or sheep "were ever known to have been, the ground being "overflowed every spring tide.

"This derelict waste has been so successfully im- "proved, that there are now upward of sixteen hun- "dred acres of the land imbanked and in tillage, pro- "ducing a rent of 900*l.* a year, with a chapel and "several farm-houses erected on it."

The subjoined extract from "The Report of the "Commissioners of the Land-Revenue of the Crown, "dated 25th of January, 1789," carries forward it's history to the commencement of the existing lease, the terms of which are not known, although it is believed that the rent is very considerably increased.

"A parcel of sandy land, called The Sunk Island, "in the river Humber, great part whereof has been "imbanked, and a chapel and several farm-houses "erected thereon. Granted on lease to Margaret "Gilby, widow, which lease, dated 7th August, 1771, "was for 15 years, from the 15th March, 1787. Year- "ly value, per last survey, 900*l.* Fines paid for last "lease 1550*l.*—Old rents 5*l.*—Rent till the 15th "March, 1787, 20*l.*—Rent from that time 100*l.*"

That part of Sunk Island which was first imbanked, was originally about two miles from the shore, and many persons are still living who recollect vessels passing between it and the mainland, to which it is now united by a bridge across a narrow channel, serving as a drain to the adjacent country. It contains at present within the banks about 4700 acres, and 24 families, and is continually increasing in size, an extensive tract having been recently imbanked, with a probability of it's being still farther enlarged.

Till 1803, this place was extra-parochial; when, by the desire of the inhabitants, it was erected into a parish under it's original name: but it is believed that they have not procured to themselves the advantages which they expected from the change. The soil of which it is composed corresponds with that already described, being a strong tenacious loam of great fertility, formed from the sediment brought down the rivers combined with the clay, which is constantly supplied by the devastation made by the sea upon the whole line of coast from Bridlington to Spurn Point, an extent of about 37 miles.

That this devastation is considerable, is proved by the following table of actual measurements drawn from different authentic sources, the last being that of a person employed by the Surveyor for the express purpose, the distances being taken in yards.

	1764	1786	1794	1797	1799	1803	1805	1810
Wilsthorpe farm house near Bridlington								221½
The gate at the east end of Barmston		792						792
The beacon in Hornsea east fields			74	66	57½	54	52½	52½
Hornsea church		1133						1068
The nearest house to the sea in Great Colden	180						80	50½
Aldborough church		2044						2012
Tunstall church		924						788
Owthorne church from the east side of the steeple							22	11
Holmpton church		1200						1190

Several villages and hamlets have at different periods been washed away by the sea, the names and situations of which are nearly ascertainable, viz. Auburn, Hartburn, Hyde, Hornsea Burton, Hornsea Beck, and Ravenser, or Ravenspur, conspicuous in our history as having been the landing place of two of our kings[e]. Another, viz. Buttevant in Mare is known only by tradition, and it is probable that others lost at still more distant periods are totally forgotten.

The destruction of land is not uniform along the coast, though constant; the sea occasionally setting to a particular part for some time, and then leaving it perhaps for several years, and taking away in another part without any apparent cause, which accounts for the variation in the above measurements[f].

The general surface of Holderness, viewed from the Wolds, appears low and flat, though, when examined upon the spot, it is found to possess a surface sufficiently undulating to lay it dry, and to adapt every part of it to all the purposes of cultivation. Little of it can indeed, with accuracy, be called level, except a line of country of no great width along each bank of the river Hull, which heretofore was wet and boggy, interspersed with cars and pools of water. The eastern bank, however, has been reclaimed by a drainage, under an act of parliament passed in the year 1764, and the consequent improvements have rendered the soil sound and fertile. A drainage likewise has been recently effected parallel to the western bank, by which considerable tracts of swamps and bogs have been brought into productive cultivation.

Howdenshire with Ouse and Derwent, is much more various in it's soil than the district last described; a very a very large tract of sandy land stretches in a north-western direction from South Cave nearly to York. This tract is in general extremely poor and barren, has originally been covered in many parts with water, and is now so little elevated above the level of the adjoining rivers, that the water is with great difficulty kept below the surface. Many of the townships, however, possess a greater or less proportion of sandy loam; some are in part composed of strong infertile clay, and some (particularly those contiguous to the Derwent and the Ouse) contain tracts of exceeding rich strong loam, all which varieties of soil interspersed in this sandy district are extremely valuable, as the greater part is either a blowing sand, which by great exertion has in some places been made to produce tolerable crops, or springy barren moor, some of which still remains, and probably will ever remain, in a state of waste.

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[e] See Rapin's History of England, folio edit. V. I. pp. 471. 611.

[f] These measurements are taken from the churches due east, and from the other stations in the nearest directions.

Parallel to the sand land, and between it and the river Ouse, is a narrow tract of remarkably fertile clayey loam, chiefly formed by the deposits of that river at former periods prior to it's being embanked. The component parts of this soil are so proportioned, as to enable it to produce every species of plant cultivated by the farmer, in great abundance and perfection.

The line of country lying to the north-east of the sand land, at the foot of the Wolds, is various in it's soil and surface; but it's aspect being favourable, and it's soil in most cases above mediocrity, and in many extremely rich, it is abundantly productive in corn and grass, in the latter of which it is chiefly employed.

The vale of Derwent, extending along the course of that river and a small branch of it called the Harford, from Filey to Kexby-bridge, has greater varieties in it's soil than any other part of the East-Riding. From Muston, along the course of the Harford till it gains the Derwent, and thence to Yedingham-bridge, is a black peat, heretofore unproductive, and covered with water during a great part of the year, which a drainage lately executed has very considerably improved: between the peat and the foot of the Wolds is a sand, so light and fine, that in a strong wind it blows and drifts like snow. Where the sand ends, a fertile loam, equally productive of turneps and wheat, commences and extends to Norton. Thence, southward between the Wolds and Derwent, the soil varies from a moderately light loam to a strong clay of various colours, lying in some places upon a coarse hard limestone abounding with shells. The surface is undulating and various, in general gently declining from the Wolds down to the course of the river. This tract of country, indeed, is exceeded by few in fertility or in beauty.

SECT. V.—MINERALS.

THIS Riding contains no metallic vein of any kind; no coal, no sandstone or limestone fit for building, no flagstone or slate, and in many parts no clay for bricks. Near Norton, Westow, and a few other places in it's north-western extremity, is found a strong hard limestone abounding with shells, incapable of being worked except by the hammer, applicable only to the coarsest purposes of building, and producing a lime held in little estimation either by the farmer or the builder; so that, as to the internal produce of the earth, no country can be worse circumstanced.

The Wolds, as before observed, consist entirely of chalk lying under their whole extent to an unknown depth. In it's texture and fracture it differs considerably from the chalk of the southern counties, but not in it's component parts, being much harder and more resembling stone, and lying in strata from nine to twelve inches thick, which are sometimes horizontal, but generally dipping to the south-east. This chalk consists almost entirely of calcareous earth, with a small portion of micaceous sand, and of iron barely ascertainable by a nice chemical test. From the want of a better article, however, it is adopted in the construction of farm-houses and other smaller buildings, and is found to answer tolerably well for that purpose if it be dug in the year before it is used, so as to become perfectly dry, otherwise it invariably perishes by the first frost.

Among this chalk, in some places, a light grey flint is found, differing in figure as well as in more material properties from the flint of the southern counties, not lying, as there, in veins sometimes horizontal and sometimes vertical, but in thin irregular strata corresponding with those of the chalk; not in nodules and irregular masses, but with a tendency to flatness and angularity; unlike the other also, which is extremely hard and durable, and capable of resisting the influence of the atmosphere, this is nearly as liable, when first taken out of the pit, to shiver with the frost as chalk itself. Experiments have been tried upon this flint in the potteries, but without success, probably in consequence of it's containing too much calcareous matter; could it have been introduced, it would have proved a valuable saving in those works, as the flint now used is collected on the southern coasts of England, and passing up the Humber, is conveyed by the rivers and canals to the potteries in the interior of the kingdom. Much of this chalk is also used for lime, being the only lime found in the East-Riding, except in a small tract of country about Norton before mentioned. The chalk lime does not stand well in buildings exposed to the weather, in consequence not of any imperfection in the lime, but of ignorance or negligence in those who make use of it. The chalk consisting almost entirely of calcareous earth, requires a much greater proportion of sand to be mixed with it, when made into mortar, than other lime, and more than ordinary pains to incorporate them, otherwise it does not set hard, but from the absorption of moisture perishes by the weather.

Marl is found in many places within the limits of this survey, some of which is of a very pure quality. Near Bridlington Quay is a vein of marl about four feet thick, of a whitish grey colour, and very light and friable, which in 107½ grains contains 19½ grains of carbonic acid gas, 5¼ grains of clay and sand, and 82¾ grains of pure calcareous earth. This stratum discovers itself in the face of the sea cliff, and appears to have once formed the bottom of a lake: similar marl is found on the edge of the cliff near Atwick, near Hornsea, at Sandley-Mere, and other places upon the coast, all of which appear to have been generated by the subsidence of water. Clay-marl, or marl united with clay in different proportions, forms the basis of the cliff along nearly the whole eastern coast of Holderness, lying at, and above high water mark, in a bed twenty feet thick or upward, and reaching sometimes within about two feet of the surface; above this marl lies a stratum of clay, varying in depth from two to thirty feet, with the occasional intervention of a stratum of gravel or sand. This foundation of marl probably lies under the whole of Holderness, and extends to the southern and eastern foot of the Wolds. It sometimes approaches very near to the surface, and in a few instances has been used as manure with great advantage. Masses and beds of marl of various extent and excellent quality may be found in most places near the northern and western foot of the Wolds, and of a variety of colours, as red, yellow, white, and blue; and would in many cases be peculiarly useful on the lands to which it adjoins. The late Sir Digby Legard, Bart. applied it with great success to his sandy lands at Ganton, the effects of which are not yet entirely worn out[g]; and it would be equally beneficial on all the sandy tracts in that neighbourhood, and not much less so on the clay land at the western foot of the Wolds. It occurs also in other parts of Howdenshire, and has been successfully applied by Sir Henry Vavasour, at Melbourn.

Gypsum, of the sort named Gypsum fibrosum by the mineralogists, of a beautiful fracture and perfectly white, is found in irregular strata imbedded in strong red clay near the surface of the ground in the parish of Scrayingham, on the banks of the river

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[g] For a particular account of Sir Digby Legard's agricultural experiments and improvements, (the first, of any importance, in the East-Riding,) see Dossie's Agriculture.

Derwent; and small quantities have long been procured there for the use of plasterers. It is found likewise in a thick stratum, which varies from four to six feet, in the hill at Holme on Spalding-Moor, a singular eminence of about two miles in circumference at the base; and from 150 to 200 feet in height, which rises abruptly out of the flat country around it. The gypsum lies on the south side of the hill, and runs part of the way down, imbedded in strong clay; but the summit of the hill upon which the church stands is gravel to a considerable depth, and near to the church is a fine spring of transparent water.

The following account of a boring made at Melbourn, by Sir Henry Vavasour, Bart., in the year 1796, shows with great accuracy the nature and variety of the strata in this district.

	Ft.	In.
Sandy loam, - - -	10	0
Clay, stirs with acids, - -	4	0
Quicksands, - - -	7	0
Warp, - - - -	13	0
Red soapy stone, mixed with warp, -	6	0
Purple gravel, - - -	2	4
Blue shale, - - -	1	6
Red soapy stone, - - -	5	0
Ditto, mixed with colours, -	18	0
White soapy stone, - -	1	0
Mixed ditto, - - -	3	0
Blue shale, - - -	1	0
Red stone, - - -	4	0
Blue stone, mixed with plaster, -	1	0
Hard stone, - - -	1	6
	78	4

	Ft.	In.
Brought forward, - -	78	4
Rock, mixed with plaster, - -	0	8
Grey gritstone, - - -	2	0
Ditto, in layers, - - -	5	0
Blue shale, - - -	4	0
Grey gritstone, in layers, - -	18	0
Blue shale, - - -	1	0
Red rock, in which the boring was left off November 12, 1796, - -	1	0
	110	0

SECT. VI.—WATERS.

THE East-Riding, although a considerable proportion of it's surface is an elevated district nearly destitute of water, enjoys in as great a degree the benefits of navigation, inland and maritime, as any other district of the island of the like extent.

The Derwent is navigable for vessels of 70 tons and under, from it's junction with the Ouse up to Malton, passing through the Riding from Hemingbrough to Stamford Bridge, for the space of twenty miles, and thence to Malton (about twelve miles) forming it's boundary. Of this navigation Earl Fitzwilliam has the sole right and property vested in him by an act of parliament, passed in the first year of the reign of Queen Anne, with the power of extending it from Malton to Ayton, in the North-Riding, and thence carrying forward a canal to Scarborough. The extension of it, as far as Yedingham-Bridge, (about nine miles above Malton by land, and fourteen by water,) for vessels of small burthen, has just commenced, and will be of infinite service to all the surrounding country. This river flows for some miles below Malton, in a deep and narrow channel, and the passage upon it is liable, from the insufficiency of several of it's bridges, to be obstructed in winter by floods for several weeks successively.

The Ouse, from York to it's junction with the Trent, where it takes the name of Humber, is another river from which this Riding derives great benefit, as it is a slow smooth-flowing river, and conveys vessels of 150 tons burthen as high as York. The tide flows naturally at York about twenty inches, but is obstructed by a lock a few miles below that city, which keeps the water up constantly a few feet above the tide. The natural flow of the tide ceases about ten miles above York, being distant from Spurn-Point, by the course of the water, nearly ninety miles; a distance travelled by the tide, probably, upon no other river in the island.

The Humber, from it's width and depth of water, is capable of admitting vessels of any burthen up to Hull, thereby opening a communication for the interior of Yorkshire with the whole world.

The river Hull, which flows near Beverley, and, by means of a canal, communicates with that town, passes through the centre of the clay-land district, and is navigable up to Frodingham-Bridge, whence a canal carries forward the navigation to Driffield, distant from Kingston-upon-Hull, by water, about twenty-five miles. Another canal, lately executed by Mrs. Bethel, of Rise, extends eastward from the river Hull to Leven, a distance of about three miles. Market-Weighton and Hedon have likewise each the advantage of a canal from the Humber, which renders them (more particularly the former) considerable markets for corn. With the advantage of so much navigable water bounding or penetrating the East-Riding, no part of it is ten miles (as measured on the map) from water carriage. A narrow tract alone, in the centre of the Wolds, containing the villages of Towthorpe, Fimber, Fridaythorpe, and Huggate, is more than eight miles from it.

Exclusive of these navigable waters, many smaller streams, and numberless rivulets, add to the comfort and ornament of the country. The Harford, a small river rising near the sea at Filey, waters and bounds the northern part of the vale of Derwent. The Foulness flows through the centre of the sand-lands; and innumerable springs rising out of the western, southern, and eastern fronts of the Wolds, and flowing into the Derwent and the Hull, amply supply with water the country lying between the Wolds and those rivers respectively.

The only stream which runs for any extent through the Wolds, is called the Gipsies. It rises at Wharham-le-Street, in a very high part of the country, near the western edge of the Wolds; and flowing along a valley in the northern part, falls into the sea at Bridlington-Quay. This stream is entirely absorbed in the gravelly soil which forms the bottom of the valley at Boythorpe, and after a subterranean passage of about nine miles, re-appears in ordinary seasons at Rudstone; but after a sudden melting of the snow, or long continued rains in the spring, gushes out of the sides and bottom of the valley, about a mile below Boythorpe, and in many other unexpected places at a somewhat greater distance, and continues to flow till the reservoirs in the hills are exhausted, or the subterranean passages of the valley are again capable of containing the absorbed stream.

A stream of considerable magnitude discharges itself at all times into the sea, at the foot of the cliffs, below high water-mark, in the lordship of Bempton, where those cliffs are several hundred feet in height. It appears probable that this is the general outlet for the water absorbed in the north-eastern tract of the Wolds; and that when this outlet, or the channels communicating with it, are incapable of containing more water, the surplus breaks out in the valley, as above described. This stream of water is very little known, as it can only be approached along the beach, at a certain state of the tide, and in calm weather; and even then, from the ruggedness of the shore and the vast perpendicular cliff, not without great difficulty, fatigue, and danger: nor is it much more easy to approach it from the sea, in consequence of the heavy surf which almost constantly breaks against the foot of these lofty cliffs. The numerous brooks which rise out of the eastern foot of the Wolds, well known to anglers under the general name of the Driffield-Waters, and which unite to form the river Hull, abound, as well as the river Hull itself, with trout of peculiar excellence and large size, some having been taken of twelve pounds weight and upwards. The cars, situated in the low tract of country on each side of the Hull, formerly very extensive, but now greatly reduced in size and number, produce variety of fish, as pike, pearch, eels, tench, burbots, roach, rud, and bream; and heretofore great quantities of wild fowl were bred and taken there, particularly at the decoys at Meux, Arram, and Watton; but the decoys are now laid dry, the wild fowl have disappeared, and the fish are in a great degree destroyed by the drainages which have been executed of late years, such small matters of comfort, or rather of luxury, being overlooked in great national improvements. Formerly there were extensive meres and cars in Wallingfen and Spalding-Moor, in the sand-land district; but these were drained about forty years ago, and the country is now cultivated as far as it will admit.

In Holderness is the largest mere in this part of England, called Hornsea-Mere; it is about two miles long, and about three quarters of a mile broad in the widest part, and contains about six hundred acres. This mere is not more than one-third of a mile distant from the coast, and so much on a level with the high tide, that in heavy gales of wind, the salt water being driven up the outlet, has sometimes entered the lake, and proved destructive to the fish in the lower part of it. This lake has evidently, in former times, been much deeper and more spacious than it is at present; but the encroachments of the sea have broken down the mounds by which it was supported, and reduced it's level and extent. Advantage, indeed, has probably been taken of these encroachments in latter ages, to reduce it still farther; and a few centuries will perhaps see it a salt-water creek. The exclusive property of this lake is vested in the family of Constable of Wassand, by a royal grant, as parcel of the manor of East-Greenwich, in Kent[h], and forms a striking and beautiful scene from the grounds of the mansion, being interspersed with several wooded islands, and animated with water fowl. It produces only pike, eels, pearch, and roach; at present the pike have the mastery over the pearch and roach; but twenty years ago the latter were far the most abundant: subsequent to that date, however, an extraordinary and unaccountable mortality destroyed, in a short time, nearly the whole of the roach, which floated on shore in prodigious quantities, and gave the pike an easy mastery over the pearch, which are now become scarce.

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[h] Of this very extensive manor, likewise, the North American colonies originally formed a part.—F. W.

CHAPTER II.

STATE OF PROPERTY.

SECT. I.—ESTATES, AND THEIR MANAGEMENT.

LANDED property is less divided in the East-Riding than in other parts of the County; perhaps less than in most parts of England. This may be accounted for from the nature of the country, and the long establishment of most of the estates which it contains. It is divided, as has been already stated, into two opposite and striking features: nearly one-half is a high, dry, chalky country, consisting heretofore of undivided Downs or Wolds, where the land has been held in little estimation, occupied at low rents, and in very large tracts; the other a low, flat country, partly rich and clayey, partly sandy and barren. The first part admitted not of minute subdivisions, because upon a small property no one could gain a livelihood; hence there never were many small estates on the Wolds, and they are now become still fewer than they were formerly in it's open state, the larger proprietors in general having purchased the property of the smaller, who were unequal to the expense of an inclosure. The owners, likewise, of most of the estates which it contains, have had the opportunity, in a long series of ages, of concentrating their property; and many of them, consequently, possess large estates in this Riding. The families of Bethell, Boynton, Constable, Crathorne, Creyke, Ellerker, Gee, Grimston, Langley, Legard, Osbaldeston, Palmes, Saltmarsh, St. Quintin, Strickland, Vavasour, and perhaps others not now recollected, have possessed their estates during many centuries, some of them even from the Norman conquest.

The Duke of Devonshire, Lord Stourton, and Lord Middleton, are the only noblemen who have residences in the East-Riding; Wressel Castle, a venerable seat of the Percys, and now the property of the Earl of Egremont, having by the carelessness of a workman been burnt down a few years ago. In addition to these, Lord Carrington and Lord Muncaster are the only other peers who have any considerable property in the Riding.

The largest estate in the East-Riding is supposed to be about £15,000 per ann.; and eight or ten others may be reckoned of about £10,000 per ann.: below this the scale gradually descends to the forty-shilling freeholder, possessing only his cottage and his little garden.

With respect to the general management of these estates, nothing occurs worthy of being recorded. Where an active landlord resides upon his property, it is well attended to; where he is ignorant or inattentive, it is neglected; where poor, it will be plundered; where left to the care of others, it will be improved in proportion to the abilities, the knowledge, or the integrity of him to whom it is intrusted: but the estates so left, with few exceptions, speak little in favour of those who have the superintendence of them; they are generally neglected, frequently injured. Unfortunately for the Riding, the resident gentlemen are not numerous, and many mansions are to be found unoccupied by their owners; evils which have greatly increased of late years, and, it is to be feared, are still increasing, as will be noticed more particularly in the succeeding chapter.

SECT. II.—TENURES.

THE tenure by which the lands of this Riding are held is, with few exceptions, freehold. Those belonging to the church, or other corporate bodies, are usually let out upon lease for three lives, renewable on the fall of each, at the rate of a year and a half, or a year and three quarters' improved rent; and the lessees commonly let them to the occupiers by the year, according to the usual tenure of the country; but there is no great quantity of land of this description[i]. Copyhold tenures were heretofore very frequent,

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[i] A much larger tract has of late years been given to the parochial clergy under acts of parliament for inclosing their respective parishes; by which assignment of lands, as experience proves, both the church and the public are greatly injured. Where the lands belong either to ecclesiastical or civil corporations, which let them upon leases for lives, the lessees having a permanent interest in them by the confidence of a regular renewal of their leases, naturally promote their improvement; and the management on such estates is not much worse than if the lessees possessed a freehold interest in them, except in the instance of timber, of which they have no inducement to encourage the growth, as the timber is always reserved to the lessors; but in the possessions of the parochial clergy, whose interest lasts only during their incumbency, (at the longest terminating with their lives,) after which it devolves on a perfect stranger, nothing but neglect can be looked for.

quent, but few now remain, and they are gradually diminishing; they were usually held by the payment of fine certain on death and alienation, and no heriots or other arbitrary or vexatious fines were exacted, or services required. The singular tenure of Borough English, by which unbequeathed lands and tenements in the manor descend to the youngest son, daughter, &c. occurs in the manor of Skidby [k], of which the Master, Fellows, and Scholars of Trinity-College, Cambridge, are

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for. It is not in human nature to expect, that a capital should be laid out to improve such estates, even were the possessors in general possessed of such a capital, or of the knowledge requisite to its right application; but where tracts of land to the extent of 1000 or 1500 acres, which require the utmost skill, activity, and exertion, and a very large capital into the bargain, (and such instances occur,) are given to persons without either skill, activity, or capital; and upon so precarious and uninteresting a tenure, what more can be expected than what usually happens, that such properties are not improved, do not keep pace with the adjoining land, and that each fresh incumbent should succeed to a failing income?—W. S.

[k] The following extract from the Court-Rolls of a late finding of a jury, as to the custom of the manor of Skidby, will show the manner of the descent of unbequeathed property there.

That the tenements of every copyholder, or customary tenant, dying without legally disposing thereof, descend first to his youngest or only son; or in case of his having no son, to his youngest or only daughter; or in case of having neither son or daughter, to his youngest or only brother; or in case of his having neither son, daughter, or brother, to his youngest or only sister; or in case of his having neither son, daughter, brother, or sister, to his youngest or only nephew; or in case of his dying without either son, daughter, brother, sister, or nephew, to his youngest or only niece; or in case of his dying without any of the foregoing relations, to his youngest or only cousin in the first degree, and so having none of that degree, to his youngest or only cousin in the second degree, and so on, to the youngest of every other degree, *ad infinitum.*—H. S.

are the Lords. The family of Ellerker, of Risby, possess considerable property in this manor, which is now held by the youngest of four sisters, in consequence of the late Roger Manwaring Ellerker, their brother, having died without legally disposing of the same. No other instance of the kind is known of in the Riding, nor any other peculiar tenure.

CHAPTER III.

BUILDINGS.

SECT. I.—HOUSES OF PROPRIETORS.

UNDER this head little can be said which will tend directly to agricultural information; although inferences may be drawn, which will indirectly affect it. There are at this time (1810) about seventy-four manorial, or mansion-houses, in the East-Riding. Of these, two are the property of a minor; twelve are going to decay, or are occupied as farm-houses; and nineteen are let to gentlemen, or remain empty: so that forty-one only are occupied by the owners of the soil! Of these seventy-four, six have been erected in about five and thirty years, where previously no manorial-house existed, but within that period fourteen others have gone to decay, or have been utterly annihilated. The houses which remain are in most instances good, and some are handsome modern mansions; not more than four, however, preserve the perfect style of the reign of Queen Elizabeth: and no ancient castle is now remaining. At a more distant period, a much greater number of mansion-houses was to be found in the Riding. A singular record is extant of the gentry in this County, in the beginning of the reign of Queen Elizabeth. In the upper part of the pannels of the wainscot of the great dining-room at Gilling-Castle, in the North-Riding, the venerable seat of Charles Fairfax, Esq. are painted armorial trees, bearing the arms of each family in every Wapontake in the County of York at that period, one Wapontake occupying each pannel, all of which, together with the beautiful finishing, wainscotting, and carving of the whole room, are still in perfect preservation. From this it appears, that there were then ninety-two families of nobility and gentry bearing arms in the East-Riding, whereas at present there are not more than about fifty-six, a decrease of more than one-third, supposing them actually to have resided (as do the fifty-six at this time) within the limits of the Riding. Of these, ten were in the Wapontake of Dickering, where there are now nine; in Buckrose fourteen, where there are now thirteen; in Holderness twenty-eight, where there are now six; in Harthill twenty-six, where there are now twenty; and in Howdenshire, and Ouse and Derwent fourteen, where there are now eight. In the hundred and fifty years subsequent to this period, an increase in the number of gentry in the Riding appears to have taken place, proportionate to the generally increased population of the country. About the beginning of the last century Warburton published his Map of Yorkshire, and being Somerset Herald, paid a professional attention, in drawing it up, to the different families of the gentry, and their armorial bearings; enumerating, with great exactness, all their mansion-houses, and surrounding his map with their respective coats of arms, beside accurately referring each to the other. From this it appears that Dickering had twenty-one mansion-houses belonging to noblemen and gentlemen bearing arms; it has now only eleven. Buckrose had fourteen, and has now the same number. Holderness had twenty-eight, it has now only eight. Harthill had thirty-seven, it has now only twenty-three: and Howdenshire, and Ouse and Derwent had twenty-four, they have now only eighteen. In all one hundred and twenty-four, where there are now only seventy-four; a diminution of about two-fifths in the last century. That this account of Warburton's is right, there can be little doubt, as most of the families are yet known to have existed, and vestiges of most of their mansion-houses may still be traced.

This account presents but a melancholy picture of the state of our population and society; so many people do not desert the place of their birth, or allow the seat of their ancestors to go to ruin, except from necessity; a necessity originating not with the people but the government, and government alone can counteract the increasing evil.

But the state-necessities of the moment may prevent the proper steps being taken, until the country is at length deprived of one of it's most valuable classes, the resident gentry, who promote the improvement and cultivation of their respective districts, administer the laws, and supply the link connecting the highest with the lower orders of society. It will then be inhabited by a few great proprietors and crowds of humble dependents, more humble and dependent from the loss of that connecting link, by which they were supported, and by which they approached the higher orders. This blame rests not with the administration of the present time, nor with any particular administration, but is the result of that system which has uniformly been pursued for a century past; which has invariably preferred the commercial to the landed or agricultural interest; which has loaded the last with many burthens to ease the former; and with many partial and vexatious taxes, whereby a country-residence is rendered less agreeable, and a country gentleman less respectable. Were a similar investigation instituted in other parts of the kingdom, the inference, it is probable, would, to a great extent, correspond with that here deduced.

During the last century, opinions have strikingly varied as to the desirable properties of a country for cultivation or for residence. Formerly, a clay soil was alone thought desirable for cultivation, and a low rich one for residence; the fuller of marshes, fens, and lakes, the better, as affording, probably, additional accommodations for rural life, and additional amusements, now held in little estimation. Hence, Holderness, Harthill, and Ouse and Derwent, were full of the seats of nobility and gentry: a century ago, as we have already stated, they possessed not fewer than eighty-nine mansion-houses, and a century and a half before that sixty-eight, where there now remain only forty-nine! whereas a change of opinion and manners have preserved to Buckrose and Dickering, (upland countries,) twenty-five, where, in the reign of Elizabeth, there were twenty-four.

SECT. II.—HOUSES AND OFFICES OF YEOMANRY AND FARMERS.

THE houses and farmeries of the tenantry are in general good, except upon the Wolds, where (chiefly in consequence of the nature of the materials of which they are constructed) they are miserably bad. The old custom, however, of building the farm-houses in villages is giving way; where new erections are required, more convenient plans for the buildings are adopted, and more eligible situations are fixed on.

The old buildings on the Wolds are, in general, composed of chalkstone, with mud instead of lime-mortar, and are covered with thatch, all which materials are subject to rapid decay, unless more time and attention are given to them than the generality of farmers are willing to bestow.

Those of later date, both there and in all other parts of the East-Riding, are substantially built of brick and covered with pantiles, which, though somewhat more expensive in the outset, greatly overbalance in the end the continued expense and inconvenience of thatch, by the saving of manure and of labour, and by the diminished risk of danger from fire, to which the property of farmers is so peculiarly exposed. If, however, the smallness and want of accommodation of the old farmeries were injurious to the tenants, it is hardly less so to overbuild them; an error into which many landlords have unwisely fallen in this Riding. This excess of house is productive of great additional expense, in consequence of increased establishments and less economical modes of living. It aggravates, likewise, the burthen of repairs, as well as that of the window-tax, now become a serious consideration. Sashed-windows are of late become not infrequent in farm-houses; a very useless piece of ostentation, as a casement-window is in every respect equally neat and comfortable, and more appropriate. Besides, the accident which in one case would break a fourpenny pane, will in the other destroy one of six times the value; the consequence is, that windows of that description are usually composed of nearly one-half paper or wood, which, in addition to those closed up to lessen the window-tax, affords but an unsightly object. The wood-work also of such windows, in consequence of the tenant's neglecting to paint them so frequently as he ought, speedily perishes; and if the landlord does not repair them, an appearance of poverty and wretchedness is given to an otherwise good house and decent family. Windows of this description have not been introduced into farm-houses much above twenty years, and those of that date are generally in a state of decay. But the folly even of an overbuilt farm-house, is surpassed by that of an ornamented one. What, indeed, can be so absurd and devoid of taste, as a Gothicised farm-house, or Castellated cottage? To the credit, however, of the land-owners of this country, such incongruities seldom occur. Whatever is adapted to it's situation, has it's appropriate merit and beauty. The country requires farm-houses, in order that it may be duly cultivated; a comfortable and commodious house and premises possess the character suited to them, and cannot fail to afford all the characteristic ornament of which they are capable. There are many of this description in the East-Riding; but no plan been noticed by the surveyor of such peculiar merit, as to entitle it to a place in this volume.

SECT. III.—COTTAGES.

THE habitations of the labouring class are here more comfortable, than in many other parts of England. Their houses generally consist of two lower rooms, with two bed-rooms over them; on the Wolds they are almost universally built of chalk, and covered with thatch; but in the low countries surrounding the Wolds, they are usually built of bricks or mud, and covered with pantiles.

It is much to be regretted, that the practice of suffering cottages to fall to decay, and the disinclination to build new ones, should be so prevalent in this part of the kingdom. The inadequacy of the rent to keep them in repair, and return proper interest for the capital, has been adduced in defence of it; but it is a miserably short-sighted policy in the proprietors of large estates thus to cut the sinews of industry, for to this cause may in a great measure be attributed the high rate of wages, which, by abstracting from the farmer a considerable portion of his profits, interrupts the progress of his improvements, or diminishes his ability to pay the full value of his farm in rent. To this cause also may be attributed, the extreme difficulty which the labouring class experience in marrying and settling in life, and the consequent laxity and dissoluteness of manners characterising the servants in agriculture. But the smallness of cottage-rents is more the consequence of a mistaken compassion, which in benefiting an individual injures the public, than of any real inability on the part of the cottager. This we shall readily admit, if we consider that when the cottage is the property of a small freeholder, who cannot afford to lose the interest of his money, it is usually let at three or four times the sum paid for similar occupations to a wealthy landlord, and is, nevertheless, eagerly sought after whenever a vacancy occurs.

In every point of view, therefore, both moral and political, as well as from a proper regard to private interest, which would be materially affected by the reduction of the price of labour, and the consequent increase of the value of land, the building of cottages is incumbent upon every one who is concerned for the improvement and welfare of his country.

The important question of the propriety of granting sufficient land to the cottagers for the maintenance of a cow, has been largely, though not conclusively, discussed by many writers upon agricultural and political economy; and as in most situations, in the way in which cows are usually kept, not less than four acres of good land are requisite for the year's support of each, the propriety of the system may fairly be doubted, as occupying too considerable a proportion of the best land, and thereby contributing to diminish the supply of animal food.

But so great is the benefit resulting to the cottager from the keeping of a cow, in the support of himself and family, that every one ought to have the means afforded him; and as the usual method of appropriating a pasture and meadow to the purpose appears highly inexpedient, it is necessary to consider how it may be done so as to remove this objection.

The cottage-husbandry at once affords the means, in it's fullest extent, of keeping a cow upon very inferior land, and with one-third of the quantity of what is requisite when maintained upon grass and hay. In the year 1801, Thomas Rook, of the township of Melbourne, received the silver medal from the Board of Agriculture, for the very excellent system under which he cultivated his little garth, containing three acres, by the Flemish mode of husbandry, under the auspices of Sir Henry Vavasour, Baronet, by which he supported two cows and a couple of pigs, and supplied his family with vegetables. His system is detailed at large in Communications to the Board of Agriculture, Vol. IV. p. 367. His example and success have induced others to adopt the same plan; and a letter from Charles Howard, Esq. to Sir Henry Vavasour, of which the following is the substance, will show with what advantage it has been pursued.

" I have much pleasure in sending you an account " of the crops cultivated this year by my labourer, " Richard Thompson. His garth, including the scite " of the cottage and fences, contains one acre and one " rood of land, which at the time he entered upon it " (seven years ago) was not worth five shillings per " acre, being the most barren part of a parcel of land " I purchased four years before, at the rate of ten " pounds per acre.

" The Flemish system of husbandry, for the know" ledge of which I am indebted to you, he has inva" riably pursued; his object being to raise the greatest " possible quantity of green food and bulbous rooted " crops; and with that view until last year, red clover, " winter tares, buck-wheat, potatoes, and turneps, " alone were admitted. Reserving a sufficiency for " the use of his family, these were consumed by two " pigs, and a small Scotch cow, and were all conveyed " to them in a wheel-barrow.

" The produce of the last summer is as follows, " the admeasurement of which I have attended to " myself:

	A. R. P.		s. d.	£. s. d.
Turneps,	0 1 0	1 cart load		0 10 0
Potatoes,	0 0 20	50 bushels,	at 1 6	3 15 0
Oats,	0 0 20	11 ditto,	4 0	2 4 0
Barley,	0 0 4	4 ditto,	7 0	1 8 0
Clover,	0 1 20	the chief support of a cow and 2 pigs for 20 weeks,	1 6	1 10 0
		half a ton made into hay,		1 10 0
Buildings, garden, and fences,	0 1 16			
	1 1 0			£. 10 17 0

“The prices stated are rather below the market, and the value of the produce was greatly diminished by the failure of the turnep crop. The potatoes were of the table sort, called ‘Warter,’ and the produce was at the rate of 400 bushels per acre. The barley a mixed sample, but principally the *hordeum nudum*, which appears to be a very productive grain. With the oats and barley, red clover was sown for the next summer's soiling, and winter tares have succeeded the failing crop of turneps. By such a mode of management the ground is never idle. The cultivation occupies little more than leisure hours, though it is principally performed by the spade; and it affords a pleasing source of interest to himself and his family, the younger branches of which are thus trained to early habits of industry.

“Thompson, before he entered upon the cottage, had the greatest difficulty in maintaining his wife and three children; he had no land, and was therefore compelled to purchase every article of consumption. His family is now increased to seven; yet, though from frequent ill health he has been unable to earn the high wages obtained by many of his fellow-labourers, he has supported his family

“ without any parochial relief, by the aid of his cow “ and pigs, and the produce of his garden.

“ The erection of double cottages on detached and “ waste parts of estates, with a small quantity of land “ annexed to each, conduces alike to the interest of “ the landlord, the farmer, and the labourer. The “ former derives an increased rent and an improved estate, while the tenant has the benefit of “ labourers on the place where their services are required, whose peculiar interest it becomes to serve “ him faithfully, being thus enabled to procure land “ for a cow, &c. which in a village is frequently not “ to be obtained at any price. I would by no means “ convert the labourer into a small farmer; but by the “ mode of cultivation detailed above, a very small “ quantity of land, and that of inferior value, is soon “ rendered sufficiently fertile to supply all his wants.

“ Nothing can be more obvious, than that the progress of agriculture must in a great measure depend “ on the facility of procuring labourers at a moderate “ rate. The temptation of increased wages alone, “ induces the bulk of our peasantry to exchange rural “ occupations for employment in our manufacturing “ towns. If, therefore, the comforts and advantages “ to be derived from convenient dwellings and a little “ land, can make the smaller wages, which the profits “ of the agriculturist can only allow, equivalent to “ those of the manufacturers, we should no longer see “ the improved modes of farming neglected. The “ great objection, the scarcity of labourers, and consequent high wages, would be done away.

“ I have the honour to be, &c.

“ CHARLES HOWARD.”

“ Melbourne Farm, 20th Dec. 1809.”

This system is also rapidly increasing in another and distant part of the East-Riding. About five years ago, an industrious labourer purchased a field of about six acres, in the parish of Scagglethorpe, built a house upon it, and cultivated it with great attention and neatness under the cottage-husbandry. He has since sold half the field to another labourer, who is going on equally well; and in the course of the last year three others have purchased land, erected houses, and are pursuing the same commendable course.

Many of the cottagers in the East-Riding have land allotted to them for keeping cows; but from the quantity required by the common mode of management, a greater number in most of the villages are deprived of this indulgence, essential as it is to comfort, to economy, and to health.

To give full efficacy to the comfort derived from a cow, by securing to the owner on very easy terms, the repayment of a certain proportion of her value in case of her death, the following paper (lately circulated in the neighbourhood of the surveyor's residence) may supply some useful hints.

The Village Cow-Club.

A plan for insuring cows having been lately adopted on an extensive scale, and with striking success, in the north of Lincolnshire, from which it appears that an average payment of about three halfpence per cow per week, (or six shillings per year,) is fully adequate to replace the ordinary losses of cows by death; it is proposed to institute a similar club in the contiguous parts of the East and North Ridings of Yorkshire, with a view of securing to the labourer and his family, at a trifling expense, the great benefits of that useful animal, without his risking more than one-sixth part of her value, upon the following conditions, viz.

1. That a treasurer and a commissioner or commissioners, without stipend, shall be elected for each district within the circuit of this institution.

2. That, in the event of one or more of the said officers dying or declining to act, the vacancy or vacancies shall be supplied by such person or persons, as a majority of subscribers in their respective districts, by letter or assent otherwise signified, shall elect.

3. That each of the subscribers shall pay half-yearly (on the 12th of May, and the 12th of November) for each cow by him or her admitted, after the rate of one halfpenny per pound upon her value per calendar month, into the hands of the treasurer of the district; which sums, when amounting to 20*l.* respectively, shall be placed at interest till wanted, to accumulate for the benefit of the fund.

4. That no cow shall be admitted without the approbation and valuation of the commissioner or one of the commissioners of the district, to whom (if required) she shall be sent for inspection.

5. That upon the death of any cow so admitted, the commissioner or commissioners of the district shall inquire into the manner of it; and if it appear to have been caused by the wilful neglect of the owner, or by his or her refusing to employ such farrier as they may have appointed, (the excess of whose bill above one-sixth of her value, shall be paid out of the fund,) he or she shall receive no benefit from this institution: but, with this exception, for each cow so admitted and dying, there shall be paid five-sixths of

her estimated value, in no case, however, exceeding 12*l.*; her hide, tallow, &c. to be sold for the purposes of the fund.

6. That when the subscriptions shall amount in each district respectively to 3 *l. per cent.* upon the aggregate value of the cows admitted, the half-yearly payments shall be suspended, until the respective funds shall be reduced by losses beneath that proportion, when they shall again be renewed: and, if in consequence of additional losses resulting from any other cause than a murrain, those funds prove inadequate to the claims upon them, each subscriber shall contribute, in proportion to the value of the cow or cows by him or her admitted, to supply the deficiency.

7. That no subscriber shall receive any benefit from this institution, upon the death of a cow above fourteen years old.

8. That if, upon any accident, the commissioner or commissioners for the district deem it necessary to have a cow slaughtered, the owner shall have the option of receiving the neat value of her carcase, after the expenses of slaughtering are deducted, or the five-sixths of her value, as entered in the books of the club.

9. That every subscriber, not making his payments on the days appointed by the third article for that purpose, when the fund is incomplete, or within fourteen days after notice in writing from the treasurer of the district, shall be excluded.

10. That all disputes upon the meaning of any part of these articles, or of the purposes of this institution, shall be determined by the commissioner or commisioners of the district wherein they occur, sub-

ject to the control of a general committee to be elected hereafter from the whole circuit[1].

This plan has not yet been acted upon in the East-Riding, but has been carried into effect in a part of the North-Riding with very great advantage; and as it appears calculated to obviate in a great degree, if not entirely, the objection raised by Mr. Malthus to an universal system of cow-keeping by the labouring class, in his Essay on the Principle of Population, Vol. II. p. 393, it is here given at length, with the view of promoting so desirable an end.

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[1] The improvements, which distinguish the above plan from that alluded to in the preamble are,

1. That the rate of payment is proportioned by Art. 3, to the value of the cow.

2. That the sum paid by the fund on the death of a cow, by Art. 5, never exceeds a certain proportion (five-sixths) of her estimated value, nor a certain absolute, 12 *l.*; the first restriction operating to keep alive the cottager's interest in her preservation or recovery, and the latter to prevent his dealing in these animals with any other view than to their milk, &c. as nutriment to his family.

3. That even the moderate payments directed by Art. 3, are suspended by Art. 6, as soon as a moderate per centage is raised upon the aggregate value of the cows admitted: the object of the institution being simply to provide against the probable contingencies of the ensuing six months, as a new call for contributions to supply deficiencies may always be made upon the next following pay-day. This is abundantly effected by three per cent.; which if the full value were paid on the death of a cow, would very nearly cover the loss of one in thirty-three, but by the present arrangement of paying only five-sixths, will cover the loss of one in twenty-eight.

It is obvious that, though primarily intended for the benefit of cottagers, this institution admits farmers and other opulent proprietors of cows to ensure them, as there is nothing in it's composition of an eleemosynary nature.—E. W.

CHAP-

CHAPTER IV.

MODE OF OCCUPATION.

SECT. I.—SIZE OF FARMS, AND CHARACTER OF FARMERS.

IT is extremely difficult to ascertain, with any degree of precision, the size of farms. The rent, or the number of acres, are equally imperfect criterions; perhaps, the capital required for the stocking of a farm, and the management of it for the first year, might furnish the best: but, from the impossibility of obtaining a sufficient number of those calculations in order to form a just comparison, we can only state by approximation the general rate of the rentals of farms, in the different districts.

On the Wolds, many are to be found from 20 *l.* to 50 *l.* per annum: a farm of about 200 *l.* per ann. is, however, of a respectable size, and such are the generality. Some instances, indeed, occur of rents of 1000 *l.* and one or two of 1200 *l.* per annum.

In Holderness, and the other surrounding districts, there are few very small farms, and still fewer of the great amount above stated. They bear, nevertheless, a higher average than upon the Wolds; perhaps, 300 *l.* per ann. may be stated as it's amount[m].

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[m] The following singular statute, it is believed, still remains unrepealed, viz. 25th Henry VIII. Chap. 14. An Act for preventing any farmer from holding more than two farms, (and they to be in one parish,) or from keeping more than 2000 sheep.—H. S.

As easy circumstances and comfortable situations in life are usually accompanied by independence and liberality of character, it is observable that the rich and well-cultivated parts of the East-Riding are chiefly occupied by intelligent and liberal-minded men, who are ever ready to adopt any new system, or try any experiment in agriculture, bearing with it a reasonable prospect of success. Most of them have received good educations, and many have profited largely by travelling to distant parts of the kingdom in search of information. In those parts of the Riding, which have fewer advantages in the soil and climate, the tenantry are in general sober, orderly, and industrious, but deficient at the same time in that liberality of sentiment, which their more opulent neighbours possess, and somewhat bigoted to the old customs and modes of management which have been handed down to them from their forefathers. Taken collectively, however, they will certainly bear a comparison with those of any other district, for respectability of character and conduct, and an openness to conviction, which is rapidly leading them forward in agricultural improvements.

SECT. II.—RENT.

In a district so various in it's soil and surface as that under survey, the rents of land are equally various.

The better sorts of land upon the Wolds may be worth 20*s*. per acre or upward, while much that has been worn out by the old system of cultivation, would be dear at one-eighth of that sum.

In the low countries surrounding the Wolds, land may be worth from 12*s.* to 30*s.* per acre, and in some parts of Holderness and Howdenshire may be valued even at a higher rate.

In the immediate vicinity of York and Hull, considerable tracts are let in small parcels at 6*l.* or 7*l.* per acre, and for gardens and absolute convenience even higher still. But so unequal is the actual value of land in this district, that though the above statements may be taken as the extremes, the average of those extremes are, by no means, to be taken as the average of the rents per acre: to obtain that with complete precision, the *proportion* of that which is rented at the highest, the lowest, and all the intermediate prices, should also be known, which is impossible. The average of the rents of the whole, therefore, and of every separate portion of the district, must be left entirely to conjecture, as nothing can be stated which may not eventually tend to error.

Rent paid in kind, or otherwise than in money, or any commutation for rent, is unknown within the limits of this survey.

Upon large estates, however, services of a trifling nature are occasionally imposed for the accommodation of the landlord, or the supply of the mansion-house; chiefly the use of teams, where more are required in a short time than the landlord can himself provide; but such requisitions being rare, and generally at convenient seasons, are seldom made objects of agreement, and are, therefore, little thought of: *One good turn requires another, and usually meets with it.*

SECT. III.—TITHES.

THE right of taking tithes in kind has of late years fortunately been greatly abridged in this Riding, in consequence of the sale of them by the lay impropriators, and by acts of inclosure, and the practice of taking them does not now frequently occur.

Half a century back, the whole country was in an open state, but far the greater part has within that period been divided under the authority of acts of Parliament for that purpose, and in almost every instance exonerated by specific agreement of this heavy burthen. Where, however, the land remains still subject to their abstraction, the general objections to the payment of them are the same as elsewhere; and no objections peculiar to this country exist, except that much of the land being naturally infertile, the abstraction of a tenth of the produce is more severely felt in the want of manure, than in more fruitful countries; nor are there any peculiar complaints against the tithe-owners; they are not here more rigid in collecting their tithes than elsewhere, and individual instances of severe exaction are fortunately of rare occurrence. The unproductive nature of the soil of the Wolds, and the great expense of cultivation as compared with it's scanty return, may be inferred from the circumstance of it's having formerly been by no means infrequent for the tithe-owner to receive a higher rent for his tithe, than the owner of the soil for the land upon which it grew, both being supposed to be let upon equally fair terms; and instances nearly to the same extent it is believed, may still be met with[a].

Under the acts for inclosing the different parishes, several modes of commutation have been adopted, which it is proper here to state, as well as the ultimate effects of each, with respect to the clergy, the land-owner, and the public.

The principle adopted under the first acts of inclosure about forty years ago, was a money-payment in lieu of all tithes; this was afterwards altered for half money and half land; and this proving unsatisfactory, the tithes were exchanged for land only: this last mode has been chiefly adopted in the late acts, but in some cases a corn-rent has been given in lieu of tithe.

The first, the course of events has proved to be entirely against the interest of the clergyman; but most beneficial to the land-owner and the public. Though probably at that time a full equivalent for all rights was given to the church, and the tithe-owner thought himself benefited upon the whole; yet money having subsequently sunk to two-thirds, or one-half, of it's value, in the same proportion has the clergyman been injured. The public, however, and the land-owner have been benefited by this more than by any other species of commutation, inasmuch, as all the land has been kept out of mortmain, and reserved in the hands of those most interested in it's improvement. But this plan, being fraught with injustice, cannot be recommended.

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[a] The value of tithes per acre or per pound rent, will vary according to the quality of the land; the tithes of the best being the highest per acre, and the lowest in the pound, and *vice versa*. The tithes of poor land which is principally in tillage, will often be equal to and let for one-third, and sometimes one-half, as much as the annual value of the estate, while those of good land will seldom exceed one-sixth of the annual value. Thus it appears, that in the case of bad land, it is the tithe of labour and expenditure, rather than the tithe of the natural produce of the land, as was in former ages the case.—J. T.

The next plan, as far as the money-payment extends, is liable to the same objection as the last; though if that of giving land were judicious, as far as that was given, it would be unexceptionable: but that the commutation of tithes for land is highly objectionable, will be subsequently shown.

The money-payment having been found objectionable from the constant, though slow depreciation of money, previously to it's late most rapid fall, every compensation of this kind was refused by the church, and land was required in it's stead. One-fifth of the open corn field, one-ninth of the common or waste land, and one-seventh of the old inclosure, were the proportions usually demanded and granted in exchange for the tithe, and in some instances still more*. After having received this inordinate share of the whole land, the church was thought secure in it's rights; and it's property, it was imagined, would undoubtedly increase with the increasing improvements and prosperity of the times. But after the first few years, this property has in many instances failed to preserve it's due proportion of value to the church; and from the first it has been most injurious to the land-owner and the public.

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* Many people think, and some act upon the principle, that it is better for ever to pay tithes in kind, than for ever to give up so large a proportion of the land; the inconvenience of having the tithe abstracted, may be, and frequently is, got over by a friendly and fair accommodation with the clergyman, but nothing can ever remove the evil of the loss of so much land, either to the proprietor of the soil or the public.—H. S.

In the acts of inclosure it has usually been stipulated in favour of the clergyman, that his allotment should be ring-fenced at the expense of the land-owners; the consequence of this has been, that in order to reduce the expense, his proportion has been laid out in one large tract; and with a view of doing the least injury to the other proprietors, it has generally been awarded in a remote and frequently in a barren part of the lordship, where an additional quantity of land has been given on that account. Thus has the proprietor, with the least capital, and with (usually) the least inclination for, or interest in, the improvement of the land, as well as the least knowledge of the means of effecting it, been placed in a situation requiring the greatest share of all.

As the tenant of the tithe allotment has usually agreed to execute the farm-buidings, and make the subdivision-fences, they have from the first been done in a manner the most insufficient, and frequently on a plan the most injudicious; and as, by way of aiding the clergyman in cultivating his farm, it has been customary to allow him the power of letting upon lease for the first twenty-one years after the inclosure, he has allowed his tenant great liberties [p] in the cultivation of his land, to recompense him for the money which he has disbursed. Thus another person becomes interested in the property, whose primary object naturally must be to execute what is enjoined him at the cheapest rate, and to reimburse himself for his expenses in the most expeditious manner during the continuance of his lease, having little prospect of a renewal of it. That this has been a frequent practice cannot be denied; and arguing of clergymen, as of other men under similar circumstances, as few of them at the time of an inclosure can look upon their lives to be worth more than twenty-one years' purchase, we cannot but perceive, that having their rent secured to them during that period, they would have no interest in preventing such plunder, and no object in looking to ulterior improvement. Thus more effectual means could not have been taken to injure the property of the church, and this natural effect it has, certainly, in some instances, produced. To the public, such a mode of commutation cannot but be injurious, by locking up such a vast property in mortmain, as well as by placing it in hands thus incapable of improving it; and though less injurious in proportion, to the land-owner who previously possessed it, in consequence of the equivalent he has received, yet is he likewise, greatly

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[p] It is invariably stipulated, however, I believe, in acts of inclosure, allowing to the clergyman this essential and very reasonable privilege —for how else could he find a tenant, who would undertake, on the precarious security of his single life, to execute the farm-buildings, or make the subdivision fences?—that his lease should be inspected, and the

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the terms of it sanctioned by the Patron and the Bishop of the diocese. Both these characters have a considerable interest in taking care, *ne quid detrimenti ecclesia capiat:* but the first, in particular, with apparently a more personal interest, has usually a local knowledge, which must enable him to defeat any project—if a clergyman could be nefarious enough to form the project—of enriching the incumbent by the impoverishment of the benefice. It does not, therefore, appear, that any reasonable grounds of apprehension exist in this respect.—— *Francis Wrangham.*

greatly injured by the loss of so large a portion of his estate [q].

The last mode of commutation, which has been adopted in a few parishes in this Riding, and which, to every party interested, appears by far the best, is that of a corn-rent. In this mode the public are benefited by the land remaining in the open market; the land-owner, by possessing his landed property undiminished; and the church, by receiving a full equivalent at all times for tithes, and by securing an income constantly and accurately proportioned to the value of land and it's produce.

Objections, it is said, have been raised to a corn-rent, on account of the difficulty of fixing this rent at different periods according to the varying price of grain; but such do not hitherto appear to have arisen in practice, and should any such exist, they may easily be provided against by countervailing remedies. As, after all that has hitherto been done in the way of commuting tithes, it may be thought by many, that tithes are the best provision for the clergy, keeping them more independent of worldly traffic and negociation than any other mode of remuneration, and placing them, from many circumstances, on a more respectable footing, (a footing on which every one would wish to see them placed,) might not some middle course be adopted, which, without entirely depriving them of their tithes, might remedy the evils arising from the collection of them, and the unpopularity which peculiarly accompanies the collection of many species of them? Might not the clergy continue to gather one sheaf in twenty, or one in thirty, the half or the third of their tithe? This would abstract little, so little as to be unworthy of notice, from the manure of the occupier of the soil; and the remaining half, or two-thirds, might be commuted for a corn-rent, or by land, according to circumstances; which probably would not exceed what might be necessary for the comfortable accommodation of a resident clergyman, (an accommodation which he ought to have according to the size of his living,) and the collection of all small tithes might be abolished by a commutation, for it is *the continual repetition of visits from the tithing-man*[r], *and the universality of the objects upon which he fixes his hand*, that renders tithes more vexatious than their amount.

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[q] At the policy of thus accumulating land, as affecting the interest of the church itself, it is sufficient to hint. Had all the tithes been commuted for land in this proportion, would not the church at this time have been much in the same situation in which it was on the dissolution of the monasteries in the reign of Henry VIII.; when the strongest plea for their destruction, and the most popular argument in it's favour made use of was, *the undue proportion* of the landed property of England possessed by the ecclesiastical body?—W. S.

In many parishes in the East-Riding, the tithes had anciently been so divided, that two-thirds of the great tithes had come into the hands of the lay-rector, and one-third remained with the vicar. These last have, in several instances, been extinguished under acts of parliament, though there appears to be no provision which could be more unexceptionable for the clergyman, or less injurious to the land-owner. Some few parishes still continue to pay only the thirtieth sheaf to the vicar; a provision which it seems ought not to be altered, as it cannot be altered, *upon the whole*, for the better [*].

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[r] And it is this which appears to me to form the great objection both to the annual payment of corn-rents, and to the suffering one-half, or one-third, of the tithe to continue to be collected in kind. Rent for tithe is never paid so ungrudgingly as rent for land: and rent to the clergyman is still more grudged, I believe, in most cases, than to the lay-impropriator; though the former is admitted even by those who think the least favourably of his function, to do something usually for "his hire," and is seldom so high in his demand of rent as the latter. —*Francis Wrangham.*

SECT.

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[*] Since the above section was written, a new mode of commutation for tithes has been in one instance adopted under an act of Parliament, which appears to be subject to fewer objections and inconveniences than any which had previously been devised, and which seems to afford a fair opportunity for the extinction of tithes upon the firm basis of impartial justice to all the parties concerned. It is by the payment for ever of one-sixth of the real rental actually reserved to the landlord, as the commutation for all tithes great and small; the rector, or vicar, having a power to examine the agreement in all cases where he has reason to suspect collusion; and in all cases where the land is held in occupation by the owner, or any near connexion of the owner, the clergyman to have power to demand a valuation to be made every seventh or ninth year, by an able professional land-valuer jointly appointed, or by two such persons, one appointed by each, in which case the two so appointed shall, before they proceed to the discharge of their office, nominate an umpire, in case they should disagree. By this plan the income of the clergyman exactly keeps pace with the progressive increase of the value of his tithes, and the improving value of land, by which he is enabled to meet the increasing expenses of the times without subjecting himself to unpleasant and pernicious disputes with his parishioners, or, as in the case of commutation for land, occupying his time and attention with secular matters.

To the public this mode of commutation is equally advantageous, by continuing a prodigious quantity of land in the open market, which would otherwise be irrecoverably abstracted from it, and by removing that great obstacle to expensive improvements which the occupier feels who is subject to tithe in kind; for in this instance the clergyman has no more interest in the annual produce of the farm than the landlord,

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SECT. IV.—POOR RATES.

THE subject of this section is one of the very first consequence, both in a national and local point of view; and the Surveyor has to regret, that he is not possessed of the means of information adequate to it's importance. In general, those in the East-Riding who are best informed, and best able to give useful information upon this as well as some other subjects, have withheld it from the public; although, as will be seen below, there are some few who have afforded every assistance in their power, and whose assistance the Surveyor has great pleasure in acknowledging. Under the existing dearth, however, of materials, as no general deductions can be drawn, the only course to be pursued is to state plain facts as they occur, which will, at least, have the merit of authenticity.

The following communication from the Rev. Francis Wrangham, vicar of Hunmanby, shows, in the most distinct manner, the state of the poor-rates during the term of nearly 130 years. "The extant poor-books "of Hunmanby begin with an assessment levied "April 12th, 1676, and are kept from that period "downward with great precision and perspicuity. "At that time some of the poor received only one "penny

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whose interest it is to encourage the tenant to make improvements from which he may derive present profit, and his landlord subsequent and permanent advantage.—H. S.

"penny, and none more than one shilling per week[t], "amounting in all to about 7*s.* 6*d.* on an average for "the weekly relief of fourteen paupers, half of whom "appear usually to have been widows, and with some "slight additional expences[u] to 21*l.* 4*s.* 6*d.* per ann. "This was defrayed by four rates of 4*l.* 19*s.* 4*d.* each, "and the interest of 36*l.* stock money, which at 14*d.* "per pound (5*l.* 16*s.* 8*d.* or 5⅚ per cent. per ann.)[x] pro- "duced 2*l.* 2*s.* As fourteen, however, exceeded the "ordinary number of paupers, sometimes three, and "sometimes even two rates in the following years were "amply sufficient.

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[t] The first instance of an allowance of 1*s.* 6*d.* per week to a pauper occurs in 1686. They were then, it is believed, occasionally meated about the parish.

[u] Amongst other charges occurs one, surely not even at that time unreasonable, for "a man and horse conveying a woman to Bempton (nearly seven miles) 8*d.*"

[x] The legal *maximum* of interest was not lowered from 6*l.* to 5*l.* per cent. per ann. till 12th Anne. It had been originally restricted to 10 per cent. by a statute of 37th Henry VIII., which from the public intermission of taking interest in the religious times of Edward VI. (and it's consequent abuse of private usury) it was found necessary to revive 13th Eliz. In the 21st James I. it was reduced to 8*l.*, and soon after the Restoration to 6*l.* per cent.; where it stuck for about half a century.

“The subjoined table exhibits, at one view, the number relieved, the weekly disbursements, and the annual expenditure, every seventh year for a century.

Years.	No. relieved.	Weekly disbursement.			Annual expenditure.		
		£.	s.	d.	£.	s.	d.
1683	9 (6 widows)	0	4	7	19	1	7
1690	8	0	5	7	20	6	11
1699[y]	7	0	4	4	18	16	9
1706	12	0	6	6	20	0	5
1713	12	0	7	8	19	0	1
1720	9	0	4	7	16	17	8
1727	9	0	5	0	17	10	0
1734	5	0	2	8	12	7	1
1741	10	0	6	0	20	7	8
1748	9	0	7	3	23	18	4
1755	5	0	5	0	18	16	8
1762	5	0	3	11	14	0	2
1769	11[z]	0	9	3	37	16	10
1776	18	1	8	2			

“It was now at the end of a complete century deemed expedient, (from the great additional incumbrance,) to form a new estimate of the lands of

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[y] In 1692 a small addition was made to the amount of the assessment, by a fine of 20*s.* imposed upon two nonjuring papists.

In 1697 and 1698, from accidental causes, the current average somewhat varied, and therefore 1699 is taken. In 1712 the parish-stock, previously increased to 40*l.* was reduced to half that sum by the death of the incumbent, one of it's holders, who was drowned in the river Harford, where it is crossed by the Driffield and Scarborough road, near Seamer turnpike, and died insolvent.

[z] This extraordinary increase was occasioned by the sudden burthen of two young families, consisting of three or four children each, belonging to two brothers of the name of Evans, who long continued (and indeed have not yet ceased) to press upon the township.

"the township, somewhat more nearly approaching "to their real value; accordingly a fresh assessment "was made; and from that period for the next nine "years, the disbursements were from 75*l.* to 95*l.* per "annum. In 1785, a poor-house was established; "and with the superadded expenses of furniture, &c. "raised the year's expenditure to 207*l.* 6*s.* 10½*d.* "This, in addition to a heavy assessment, absorbed "the remainder of the parish-stock, together with a "windfall of 40*l.*, which had occurred to the township "in 1767[a]. The expense in individual paupers being "thenceforward no longer stated separately as before, "the number of rates annually levied exhibit most "perspicuously the varying ratio of the yearly dis-"bursements, which would be fallaciously represented "by the aggregate of the annual expenditure, as that "includes the variable expenses of paupers from "several associated townships, (themselves likewise "fluctuating in number,) who pay a certain sum of "2*l.* 2*s.*[b] per annum each, besides the amount of their "own paupers' bills, as an acknowledgement of the "advantage accruing to them from the institution.

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[a] The brother of one of the paupers, of the name of Shepherdson, (a servant of the Earl of Carlisle,) dying intestate, his effects to that amount devolved to the parish.

[b] This, with a necessary attention to the depreciation of money, is now, (1810) raised to 3*l.* 3*s.*; and the allowance to the master of the workhouse is fixed for the ensuing six years, at 2*s.* 6*d.* per week. Non-parishioners pay an additional sixpence, in consideration of the accommodations of washing, fuel, &c.

The annexed Table gives the number of rates from 1786 to 1803.

Years.	No. of Rates at £8 15.			
		£.	s.	d.
1786	10	87	10	0
1787	8	70	0	0
1788	9	78	15	0
1789	10	87	10	0
1790	9	78	15	0
1791	7	61	5	0
1792	6	52	10	0
1793	7	61	5	0
1794	8	70	0	0
1795	9	78	15	0
1796	10	87	10	0
1797	14[c]	122	10	0
1798	13	113	15	0
1799	13	113	15	0
1800	11	96	5	0
1801	13[d]	113	15	0
1802	3[e]	76	13	0
1803	6[f]	153	6	0

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[c] Twelve other rates were also collected this year, to defray the expense of procuring a man for the navy.

[d] Prior to this year, 1*s.* 6*d.* per head per week was allowed to the master of the workhouse; when it was increased to 2*s.*; it is now (1810) kept remarkably clean, as well as the paupers, and is much more free from murmurs and complaints, than places of this description have usually been represented. If Mr. Crabbe's descriptions in his Borough are correct, these "pauper-palaces," (as he calls them,) must indeed be

——— prisons with a milder name,
Which few inhabit without dread or shame. (pp. 24—244.)

But the poetry of the whole passage is exquisite; and one can only hope; that like other exquisite poetry, it owes some of it's embellishment to fiction.

[e] In this year the inclosure of the township took place, and a new valuation was effected.

[f] This increase arose from the hiring of three men for the supplementary

In the parish of Righton, an adjoining parish to Hunmanby, but much smaller, the oldest poor-book which can be found, commences with the year 1738. The succeeding table shows the number of paupers relieved, the total annual expenditure, and the rate per pound rent per annum levied to defray it, for the first ten years at the commencement of the book, and for the last ten years ending the 6th April, 1807, being an interval of fifty years.

Years.	No. of Paupers.	Total expense of the year.			Rate per pound Rent.		Years.	No. of Paupers.	Total expense of the year.			Rate per pound Rent.	
		£.	s.	d.	s.	d.			£.	s.	d.	s.	d
1738	2	2	14	10	0	2	1798	8	22	6	2	0	6
1739	4	3	8	8	0	3	1799	7	15	17	0	0	6
1740	3	7	15	10	0	6	1800	8	28	16	0	1	0
1741	3	6	3	3	0	5	1801	9	33	15	0	1	2
1742	2	4	15	0	0	4	1802	9	24	0	8	0	6
1743	3	5	8	10	0	4	1803	8	27	17	7	0	6
1744	1	3	9	4	0	4	1804	8	28	0	10	0	8
1745	1	4	12	4	0	3	1805	6	29	4	1	0	10
1746	1	3	19	6	0	2	1806	5	27	3	3	0	8
1747	3	5	15	5	0	5	1807	6	25	1	1	0	8

The great increase of the poor's rate in the years 1800 and 1801, was occasioned by their being years of scarcity, when a great quantity of corn was sold to the poor at reduced prices, instead of giving them relief in money, which was considered to be on all accounts the best mode of giving them temporary assistance. Within the last thirty years, the population

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mentary militia, and four for the army of reserve, in all amounting to an extraordinary expense of upward of 100*l.*

tion of this parish has from various causes diminished about one-third, notwithstanding which, the number of poor maintained or relieved by the parish in the last ten years, is more than thrice the number maintained or relieved in the first ten years of the above table.

The apparent inconsistency between the rate and the expenditure, arises from the surplus or deficiency of one year being carried forward to the next.

The five contiguous parishes in the south-eastern extremity of Holderness have paid rates according to the annexed table, which describes the rate per pound rent at each place at the two periods; the last column showing the advance of the rent of each parish during that space of time, and thereby the relative proportions of the poor's rate to the rental.

		Rate per pound Rent.			Rate per pound Rent.		Rent having advanced in the same period.
		s.	*d.*		*s.*	*d.*	
Kilnsea, ...	1745	0	2¾	1806	1	0	as 16 to 52.
Easington,	1783	0	4¼	1806	2	2	as 12 to 14.
Skeffling, ...	1760	0	4¼	1806	1	6	as 52 to 102.
Out Newton,	1761	0	6	1806	1	6	as 26 to 51.
Holmpton,	1757	0	5¾	1806	1	6½	as 58 to 157.

In the parish of Hedon, the disbursements for the relief of the poor in the year 1785, amounted to 88*l.* 13*s.* 6*d.*, in 1795 to 121*l.*, and in 1805 to 440*l.* 19*s.*

In the parish of Stamford-bridge, the poor's-rate in the year 1800, was 3*s.* per pound rent; in 1801, 2*s.*; in 1803, 1*s.* 6*d.*; in 1804, 1*s.* 6*d.*; and for the thirty preceding years never exceeded 6*d.* per pound rent.

1	2						
	Total Money raised by the Poor's-Rate, and other Rates, within the year ending Easter, 1803.			Amount of sir or Assessments, dRe-turns made un(II. c. 56, in 178der 16 Geo. III. c.			
				Medium average of Money annually raised by Assessment in the years ending Easter, 1783, 1784, 1785.			
	£.	s.	d.	£.	s.	d.	d.
Buckrose	3,464	15	7¼	746	2	8	5
Dickering	4,786	5	6½	1,126	6	0	3
Harthill Wapontake,— Bainton Beacon Division	2,944	11	5	519	12	6	5
Harthill Wapontake,— Holme Beacon Division	3,178	14	1	660	15	4	0
Harthill Wapontake,— Hunsley Beacon Division	5,809	4	4½	1,275	8	3	0
Harthill Wapontake,— Wilton Beacon Division	2,464	7	0¾	481	13	7	2
Holderness Wapontake,— Middle Division	6,455	12	7¼	1,131	8	2	1
Holderness Wapontake,— North Division	3,030	11	4½	608	6	7	2
Holderness Wapontake,— South Division	4,516	19	1¾	784	10	10	9
Howdenshire	4,826	16	4	764	13	4	6
Ouse and Derwent	3,159	13	3½	632	9	5	9
Town and Liberties of Beverley	1,545	5	8¼	475	6	3	3
Town and County of Kingston-upon Hull	8,798	15	7	2,109	18	1	2
Liberty of St. Peter of York, in the East-Riding	705	11	10¼	127	10	6	0
Total of the East-Riding	55,687	3	11½	11,444	1	6	7

THE annexed TABLE of the assessments and expenditures for the relief of the poor in the East-Riding, and the explanatory observations which follow, are extracted from the returns made by the direction of the House of Lords; and as they afford a comprehensive view of the subject, they are here inserted in their original form.

COUNTY OF YORK,—EAST-RIDING.

Observations.

1. Returns from four hundred and twenty-two parishes or places in the East-Riding of the County of York have been received, and are entered in this abstract. Returns from four hundred and twelve parishes or places are entered in the abstract of the returns of 1785: four hundred and sixteen returns in the abstract of the returns of 1776.
2. Eighty-six parishes or places maintain all, or part of their poor in workhouses. The number of persons so maintained, during the year ending Easter 1803, was 614; and the expense incurred therein, amounted to 7667*l.* 3*s.* 0¼*d.* being at the rate of 12*l.* 9*s.* 8¾*d.* for each person maintained in that manner. It appears from the abstract of the returns of 1776, that there were then eighteen workhouses capable of accommodating 550 persons.

3. The number of persons relieved out of workhouses, was 8867, besides 1869, who were not parishioners. The expense incurred in the relief of the poor not in workhouses, amounted to 33,721*l.* 2*s.* 8½*d.* A large proportion of those, "who were not parishioners," appear to have been vagrants; and therefore, it is probable, that the relief given to this class of poor, could not exceed two shillings each, amounting to 186*l.* 18*s.* This sum being deducted from the above 33,721*l.* 2*s.* 8½*d.* leaves 33,534*l.* 4*s.* 8½*d.* being at the rate of 3*l.* 15*s.* 7½*d.* for each parishioner relieved out of any workhouse.
4. The number of persons relieved in and out of workhouses, was 9481, besides those "who were not parishioners." Excluding the expense supposed to be incurred in the relief of this class of poor, all other expenses relative to the maintenance of the poor, amounted to 44,148*l.* 6*s.* 4*d.* being at the rate of 4*l.* 13*s.* 2½*d.* for each parishioner relieved.
5. The resident population of the East-Riding of the County of York, in the year 1801, appears from the population abstract to have been 139,433; so that the number of parishioners relieved from the poor's rate, appears to be seven in a hundred of the resident population.

The number of persons belonging to Friendly Societies, appear to be eight in a hundred of the resident population.

The amount of the total money raised by rates, appears to average at 9*s.* 9½*d.* per head on the population.

The amount of the whole expenditure on account of the poor, appears to average at 6*s.* 4½*d.* per head on the population.

6. The expenditure in suits of law, removal of paupers, and expenses of overseers, and other officers, according to the present abstract, amounts to 2946*l.* 18*s.* 7*d.* The amount of such expenditure, according to the abstract of the returns of 1785, (comprised in columns 11, 12, and 13 of that abstract,) was then 930*l.* 9*s.* 7*d.*

7. The expenditure in purchasing materials for employing the poor, according to the present abstract, amounts to 196*l.* 4*s.* 10½*d.* The amount of such expenditure, according to the abstract of the returns of 1785, was then 131*l.* 2*s.* 11*d.*

8. The poor of two parishes or places in the East-Riding of the County of York, (as stated in the notes,) are farmed or maintained under contract.

9. The poor of the town of Kingston-upon-Hull, in this Riding of the County of York, (as duly noticed,) are maintained and employed under the regulations of special acts of Parliament.

10. Twenty five Friendly Societies have been enrolled at the Quarter Sessions of this Riding, pursuant to the acts of 33d Geo. III. c. 54, and 35th Geo. III. c. 3.

11. The Clerk of the Peace states, "the proportion which the rated rental bears to the rack rental, in the East-Riding of the County of York, is irregular; but, I believe it will, on an average, be about three-fourths." In thirty-one parishes or places in the East-Riding of the County of York, (as duly noticed,) the rate in the pound is stated on the rack rental. The amount of

same; to repair or to erect any buildings thereon, and to examine into the state and condition of the farm. The tenant agrees to hold the farm and premises from the sixth day of April next ensuing, for one year, and so from year to year as long as both parties shall jointly approve; such occupation to be determinable nevertheless at the end of the first, or any succeeding year, upon six calendar months' previous notice being given by either of the said parties to the other for that purpose. The tenant also further agrees, that the farm shall become vacant on the sixth day of April next following his decease, although due notice shall not have been given for that purpose; and that his executors shall not have power to hold it after that time. The rent to be paid by equal half-yearly portions on the eleventh day of October, and the sixth day of April, (if demanded,) and over and above the said rent, all taxes, assessments, and out-payments, public and parochial, due from the said farm (except in some cases the land-tax, and the landlord's property-tax). The tenant also engages, at his own expense, to maintain and keep in good and sufficient repair, the farm-house, and all the buildings upon the premises (the walls and main-timbers only excepted); also all the hedges, ditches, drains, bridges, fences, gates, and stiles, upon and belonging thereto, and to leave them so on quitting: and that he will not underlet or part with the possession of the farm, or any part of it, nor fell, lop, pollard, or otherwise injure the timber growing thereon; nor sell, or remove therefrom any hay, straw, turneps, or manure which may be produced upon it, but cause the same to be consumed and spread in a regular manner upon such parts of the farm as are most proper to receive it. That he will not plough out, or convert into tillage, certain parts of the farm now in grass without leave in writing from the landlord or his agent, and that in managing the remainder of the farm he will pursue the course of cultivation previously specified, unless he receive permission to vary it; and that he will apply at least four chaldrons (thirty-two bushels each) of lime to the fallow next succeeding old swarth or grass-seeds broken up; to be repeated every eight or ten years[g].

The tenant to be entitled to a way-going crop from such part only of the farm as was a clean bare fallow, or turneps properly hoed and eaten on the land, in the due course of cultivation, in the year preceding his quitting; he paying one year and a quarter's average-rent of the farm to the succeeding tenant for the land on which it grew, and selling the crop to him at a valuation to be made on or before the first day of August, by two persons, one to be chosen by each party, which two persons shall, before they proceed to the discharge of their office, appoint an umpire, in case they should disagree[h].

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[g] This is a most absurd clause. Are not the tenants ready enough to wear out the land without the landlord binding them to do it? Has he forgotten that lime *makes rich tenants and poor landlords?* But it is to be supposed that such a clause rarely occurs.—W. S.

[h] The right of sowing down way-going crops being attended with great inconvenience both to the quitting and succeeding tenants, particularly to the latter, it has been deemed expedient upon some large estates, to diminish the right gradually on the making of a new agreement, till it is at last extinguished, and the off-going tenant is only paid for seed sown, and labour performed, in the due course of management of the farm, which is now in many cases the whole he is entitled to.

Originally

The tenant to leave all the manure produced from the crops of the last year, for the use of the succeeding tenant without any recompense[i].

The tenant not to be entitled to any allowance for improvements which have been made by him twenty-one years at the time of quitting; but for any permanent improvements in buildings beyond necessary repairs, or for planting new fences, which shall have been properly cleaned and guarded; to be allowed so much of the original expense as the years which are then unexpired of that time bear in proportion with the twenty-one years, &c.

The above clauses are obviously selected from different agreements, as they are by no means collectively applicable to every situation.

The usual times of entry are, to the stubbles intended for fallow, on the 14th of February; to the grass-land on the 6th of April; and to the house and premises on the 13th of May. This last term has, in a few instances, been advantageously changed to the first

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Originally the off-going tenant was entitled to sow down the whole crop of the year; and in some instances he was not even obliged to sell it to his successor, but might remove it (if he pleased) from the farm. To remedy this evil, the above clause was framed, which has been still more abridged by limiting the quantity to one-third or one-fourth of the land regularly in tillage in the year of quitting, after which it is quite done away. This is a plan of general utility to all tenants entering upon farms, as it enables them to command a very considerable capital for the improvement of the land, which would otherwise be locked up in the crops upon the farm, during the whole of their occupation, and of which the interest lost might justly be regarded as so much added to their rent.—H. S.

[i] This clause is framed upon the same principle as the preceding one, but they are by no means universal, or even general; though it were much to be wished that they were so, as being conducive to the general good.—H. S.

first of May, the quitting tenant having had ample time for thrashing out his crop before that time, and an early separation being usually desirable both to him and his landlord, as they are seldom upon the best footing. It would also be an advantage to change the entry upon the stubbles to Christmas, as this would afford the whole benefit of the winter's frost to temper a foul or stiff fallow, without doing any injury to the quitting tenant, to whom they are of no value after that time.

SECT. VI.—EXPENSES AND PROFITS.

It appears almost impracticable to estimate with any degree of precision, the expenditures and profits upon a farm, so as to form a just criterion of those of a whole district, both depending so entirely on the nature of the soil, the spirit, judgment, and industry of the farmer, the peculiarity of the seasons, and the particular state and proximity of the markets.

The expenses incident to the management of a farm are very greatly enhanced in proportion to the rents within the last few years, from the exorbitant increase of wages, taxation, and parochial rates, which renders a much larger capital requisite now than formerly. A capital, indeed, not less than the amount of five years' rents should be possessed by the farmer upon entering to a farm, for stocking it, paying the first year's rent and expenses, and enabling him to carry it forward with spirit and advantage. The profits of agriculture are certainly not great; for though farmers may be found, who, in a long life of industry and economy, have risen to independence, yet they rarely, if ever, attain to affluence. Improvement in the appearance and habits of a farmer is looked upon by the public with an eye of jealousy, and has not unfrequently been the cause of an advance in his rent, while in every other class of society, the progress from indigence to ease, and from independence to opulence, is daily seen and applauded.

The following "Comparison of the Expenses of "Arable Land, in 1790 and 1804," is extracted from Communications to the Board of Agriculture, Vol. V. p. 17.

"In April 1804, a requisition was sent from the "corn-committee of the House of Commons, to the "Board of Agriculture, for information relative to the "comparative expenses on arable land, in the two "periods of 1790 and 1803. The Board was solicitous "that the information they gave should be the most "correct which could be procured; and with this view "ordered a circular letter to be sent to a number of "their correspondents in every county of the kingdom, "and the following tables are formed from the answers "received.

"In regard to the information thus procured, it "stands upon the distinct authority of the respective "individuals, for the accuracy of which it is impossible "that any public body can be responsible; but from "comparing the results, there appears to be sufficient "reason for concluding, that the particulars are given "with no inconsiderable degree of care."

Average of the Communications from Yorkshire.

	LABOUR.	1790.			1804.		
		£.	s.	d.	£.	s.	d.
	Price per week in winter	0	8	1½	0	12	6½
	Price per week in summer ...	0	10	6¼	0	12	1½[k]
	Price per week in harvest ...	0	13	5½	1	2	5
	Head man's wages per ann...	14	10	6	22	18	4
	Second man's wages per ann.	11	5	10	16	5	6
	Reaping wheat per acre	0	6	5¼	0	11	11½
	Mowing barley per acre	0	4	0¼	0	6	9
	Thrashing wheat per quarter	0	2	5¼	0	4	2½
	Thrashing barley per quarter	0	1	5½	0	2	6
	Filling earth per yard	0	0	2	0	0	3½
	Filling dung per yard	0	0	2	0	0	3½
	ARTISANS.	1790.			1804.		
		£.	s.	d.	£.	s.	d.
Blacksmith	Wheel tire per lb.	0	0	3¼	0	0	4¾
	Plough irons per lb.	0	0	4	0	0	6¼
	Chains per lb.	0	0	5	0	0	8¼
	Shoeing per lb.	0	0	4½	0	0	5½
	Carpenter per day	0	1	6	0	3	1
	Mason per day	0	2	1¾	0	3	3¼
	Thatcher per day	0	1	6¼	0	2	7
	Collar-maker's work	0	1	11½	0	2	5½

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[k] Quere: Is not this an error, being less than the wages in winter?

RENT, TITHE, AND PARISH TAXES.	1790.	1804.
Rise of Rent per cent. from 1790 to 1804		53 7/27
Tithe per acre	£0 4 0½	£0 6 0
Parishes' taxes in the pound rent	0 2 1½	0 4 8
CULTIVATION.	1790.	1804.
	£. s. d.	£. s. d.
Expense of an acre of turneps	4 9 3½	6 15 10½
Expense of an acre of barley	2 11 9¼	3 10 5
Expense of an acre of wheat	4 9 0	6 13 5
Expense of manure	0 4 3	0 8 3[1]

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[1] "This table is of use merely to show the rise per cent.; but will "not at all explain the real expense attending these crops. Some cor- "respondents omitted rent and tithe, some omitted seed, others took "no notice of manure; and thus the returns were found imperfect "upon every point, except in the difference between the two periods."

<table>
<tr><th colspan="9"><i>Rise per Cent.</i></th></tr>
<tr><td rowspan="4">LABOUR.</td><td colspan="2">Price in Winter
1790—1804.</td><td colspan="2">Price in Summer
1790—1804.</td><td>Price in Harvest
1790—1804.</td><td>Headman's wages
1790—1804.</td><td colspan="2">Second man's wages
1790—1804.</td></tr>
<tr><td colspan="2">54 14/19</td><td colspan="2">14 134/169</td><td>66 106/129</td><td>58</td><td colspan="2">44 36/275</td></tr>
<tr><td colspan="2">Reap Wheat
1790—1804.</td><td colspan="2">Mow Barley
1790—1804.</td><td>Thrash Wheat
1790—1804.</td><td>Thrash Barley
1790—1804.</td><td>Fill Earth
1790—1804.</td><td>Fill Dung
1790—1804.</td></tr>
<tr><td colspan="2">70 70/309</td><td colspan="2">66 1/13</td><td>72 76/117</td><td>71 3/7</td><td>75</td><td>75</td></tr>
<tr><td rowspan="3">ARTISANS.</td><td colspan="4">Blacksmith.</td><td rowspan="2">Carpenter
1790--1804</td><td rowspan="2">Mason
1790--1804</td><td rowspan="2">Thatcher
1790--1804</td><td rowspan="2">Collar-maker.
1790--1804</td></tr>
<tr><td>Wheel-tire
1790—1804.</td><td>Plough-irons
1790—1804.</td><td>Chains
1790—1804.</td><td>Shoeing
1790—1804.</td></tr>
<tr><td>46 2/3</td><td>56 1/4</td><td>65</td><td>29 7/17</td><td>105 5/9</td><td>57 43/101</td><td>70</td><td>25 50/91</td></tr>
<tr><td rowspan="2">RENT, TITHE, AND PARISH TAXES.</td><td colspan="2">Rise of Rent
1790—1804.</td><td colspan="2">Tithe
1790—1804.</td><td colspan="2">Parish Taxes
1790—1804.</td><td colspan="2"></td></tr>
<tr><td colspan="2">53 7/7</td><td colspan="2">43 29/97</td><td colspan="2">119 21/31</td><td colspan="2"></td></tr>
<tr><td rowspan="2">CULTIVATION.</td><td colspan="2">Expense of an acre of Turneps
1790—1804.</td><td colspan="2">Expense of an acre of Barley.
1790—1804.</td><td colspan="2">Expense of an acre of Wheat
1790—1804.</td><td colspan="2">Expense of Manure
1790—1804.</td></tr>
<tr><td colspan="2">52</td><td colspan="2">36 1/61</td><td colspan="2">50</td><td colspan="2">93 9/41</td></tr>
</table>

CHAP.

CHAPTER V.

IMPLEMENTS OF HUSBANDRY.

LITTLE can be said in favour of the waggons which are in general use here; they are high, narrow, and long; an inconvenient form for the purposes for which they are intended, that of carrying a top-load, particularly in such parts of the country as are irregular; and they have but one peculiarity in their construction which seems worthy of more general adoption. This is a strong chain on each side of the waggon, of which one end is fixed to the back of the fore-axletree, and the other to the under-side of the body, of such a length as just to prevent the opposite wheel from locking against the side of the waggon in turning; by which means the body may be set much lower between the wheels, without being weakened by cutting the side to admit the wheel, (as is sometimes done,) and the waggon may be turned within a much smaller space.

The mode of yoking the waggons also, in great part of the East-Riding, appears to be a practice nearly peculiar to that district, and is deserving of imitation. The four horses are yoked two abreast, in the same manner as they are put to a coach, two drawing by the splinter-bar and two by the pole; those at the wheel drawing also by a swinging bar, which the wheel-horses of every carriage ought to do, as they thereby obtain considerable ease in their draft, and are less liable to be galled by the collar than those which draw by a fixed bar; the driver then, being mounted on the near-side wheel-horse, directs the two leaders by a rein fixed to the outside of each of their bridles, they being coupled together by a strap passing from the inside of each of their bridles to the collar of the other horse. In this manner, when empty, they trot along the roads with safety and expedition; and when loaded, the horses being near their work, and conveniently placed for drawing, labour with much greater ease and effect than when placed at length. Were the waggon indeed of a better construction, the team would be excellent.

In the making of both waggons and carts, too much attention is paid to fashion and the appearance of lightness, to the neglect of strength and utility. He is considered as the best wheel-wright who can pare away his wood the smallest, and who takes the greatest pains in carving the bodies of his vehicles, to be painted bright blue and scarlet, picked out with black. The carts are large, and calculated to be drawn by two or three horses; few one-horse carts are in use. Both carts and waggons are almost universally made with three-inch wheels, and run four feet ten inches wide between the outsides of the wheels. *It is believed* here, that carriages with large axle-trees run easier *on ploughed ground, and in deep or heavy roads,* than those which have small ones, and as easy on hard level roads; but as many inconveniences and accidents have arisen from the use of wooden axle-trees alone, it has become the practice in the eastern part of the Riding, and perhaps generally so, to let a bar of iron half an inch thick, and two inches broad, into each side of a wooden axle-tree. These extend through the wheel, and about nine inches under the body of the carriage, and are bolted together through the axle-tree; and thus, by the bars standing on edge, give all the strength of an iron axle, without affecting the size of the wooden one. The carriage shown in pl. I. fig. 1, is in use in a few instances in the eastern part of the Riding, and is found to be very convenient for a variety of purposes in the internal work of the farm, as carrying wood, large stones, hay, corn, thorns, and other heavy work. The original idea of it was taken from the car which is in use among the peasantry of Ireland, with the hinder wheels added, and a few other adaptations to the purposes in which it is now employed. The dimensions of the car are as follow:

	Ft.	In.
Length of shelvings -	[illegible]	[illegible]
——— of bottom	[illegible]	[illegible]
Breadth of ditto - -	4	0
——— to outside of shelvings -	5	8
Height to upperside of bottom -	[illegible]	0
——— of hinder-wheel -	[illegible]	10
——— of fore-wheel -	2	6
Breadth of wheels - -	0	4
Length of shafts - -	8	0

In the southern and western parts of the district under survey, the Rotherham or swing-plough is in general use. This, when well made, does it's work more perfectly and with greater ease, both to the man and the horses, than any plough which the Surveyor has noticed elsewhere. On the Wolds the old-fashioned foot-plough, with a short straight wooden mould-board, still continues in use, and is altogether a most clumsy, heavy, ill-formed implement, frequently requiring three and even four horses to draw it, on a soil where, with a better instrument, a pair would be amply sufficient. At the same time, however, a piece of economy is practised in the use of these

Fig. 1

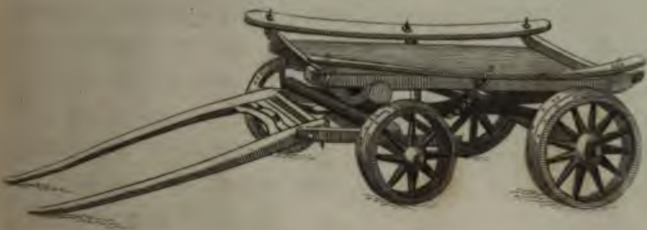


Fig 2

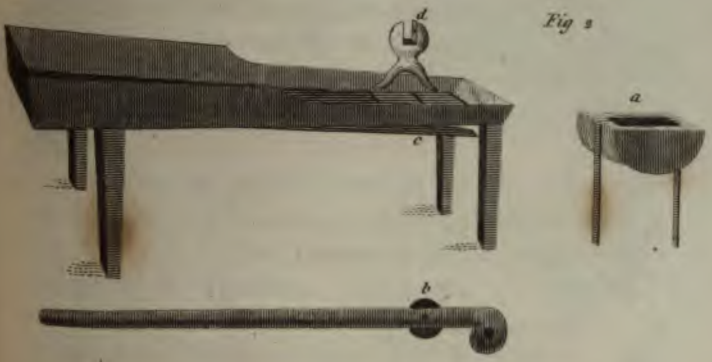
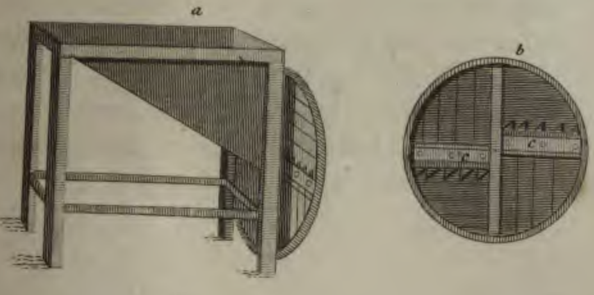


Fig. 3



26

Neele sc. Strand.

these ploughs, which a southern farmer will hardly believe possible. The four horses are always driven two abreast by the ploughman with strings, as in driving only a pair, without any assistant whatsoever; and it is by no means uncommon to see a boy of twelve or fifteen years of age holding the plough, driving his four horses, and performing his business in a workmanlike manner.

In the Vale of Derwent, where moist springy pastures are pretty frequent, the gripping or surface-draining plough is much used; but it is by under-draining, and the use of the swing-plough to lower the ridges, rather than the draining plough, which, by taking a sod out of the furrow, adds to the evil, that improvement of a permanent nature is here to be expected.

A machine for cutting Swedish turneps, which appears to perform it's work very well, is shown in pl. I. fig. 2. It is in the possession of the Rev. ——— Hildyard, of Winestead, and is said to have been invented by some person in Leicestershire. This is a bench or frame of wood for holding a supply of turneps, with a hollow grating of knives at the right-hand end; (*a*) is a block of wood, which fits the grate, with a plate of iron upon the top for the wheel in the lever (*b*) to work upon, and has two pins of iron, one at each end, which go through the frame, and rest upon two springs (*c*) fixed under the frame to raise the presser. The lever is attached to the fulcrum (*d*) by a pin, and is about 3½ feet long. The turnep is placed whole upon the grating, and forced completely through it by the presser. This machine, although the best in use in this district, is in itself imperfect, as the resistance to be overcome is not [illegible] that of the turnep, but also of the springs.

A much more simple and efficient machine for the purpose was noticed, by the Surveyor, at work in the farm-yard of Chr. Mason, Esq. at Chilton, in the county of Durham; and though properly, perhaps, not admissible into this Survey, yet being superior to any here in use, he has ventured to introduce it. The hopper (*a*) pl. I. fig. 3, affords a constant supply of turneps to the knives, through an opening across the lower part of the perpendicular end, the size of which is regulated by a slide according to the size of the turneps; the rim of the frame (*b*) is of wood, with two bars of wood crossing it at right angles, to one of which the two flat knives (*c*) are fixed by three screws each, being thus easily taken off to be sharpened. The intermediate parts are closely boarded up, except a narrow opening between the flat knives and the projecting ones, through which the cuttings fall; the boarded part recedes about an inch within the flat knives, and the turneps falling forward against it, present so much to be cut off by each knife in one revolution. There are about seven or nine knife-points, according to the size of the machine, for cutting the slices across, which project out of the boarding on the opposite side of the opening to each flat knife. The frame is turned by a handle standing out of one of the cross-bars, and works with great facility.

The Peas-hook (improperly, but commonly, so called) and the Bean-hook, are implements peculiar to the East-Riding. They are made of old sithe-blades; the former is about a foot long, one end of which being beaten to a point, is driven into a shaft about four feet long. See pl. II. fig. 1.

The

Pl.I

Fig. 1

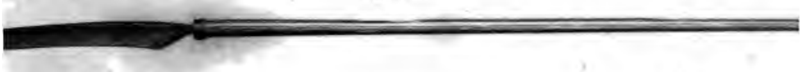


Fig. 2

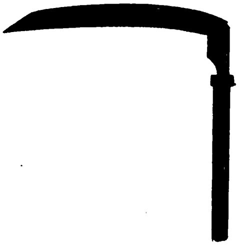


Fig. 3

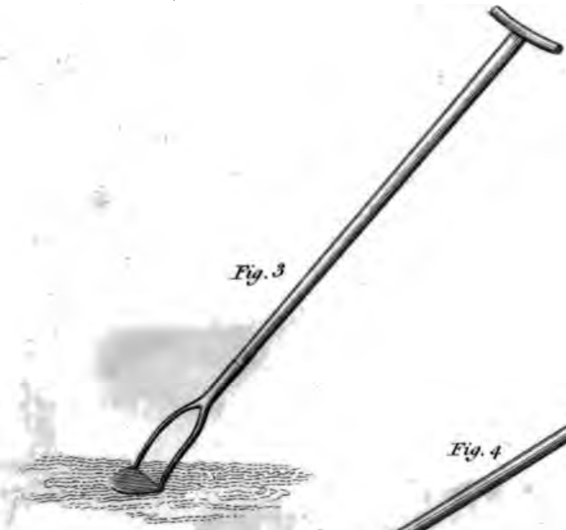


Fig. 4

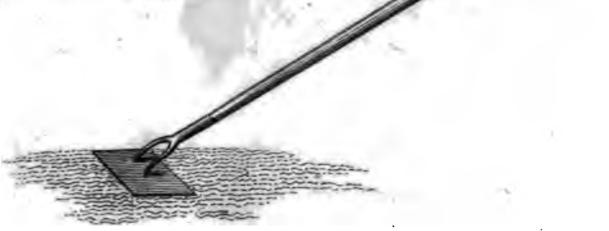
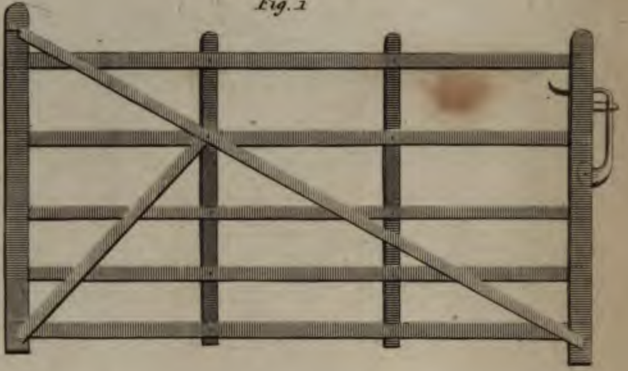


Fig. 1



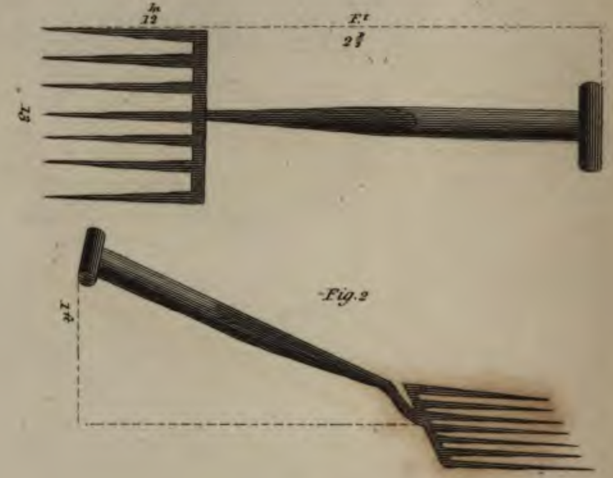
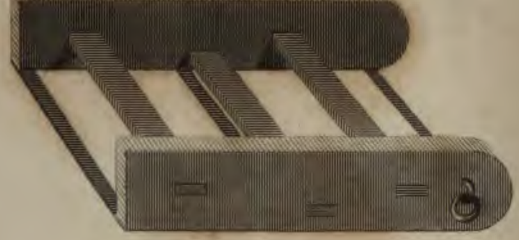


Fig. 2

Fig. 3



M.S.

[illegible]

The bean-hook is also made of part of a sithe-blade, about half a yard in length; one end is pointed to be driven into the handle, which is about one foot in length; the wing of the blade is then cut across as far as the back, which is bent to a right angle, and the wing is rivetted where it crosses upon the other part; see pl. II. fig. 2. Both these implements are useful for their respective purposes, and have the additional recommendation of cheapness.

Fig. 3, pl. II. shows the hoe, which is used in Holderness for cleaning the intervals of drilled beans. It appears to be an improvement upon the Dutch hoe, which has long been used in gardens, and is a very useful tool, where the beans are drilled too close to admit the horse-cultivator.

The hoe shown at fig. 4, pl. II., was invented by Dr. Nooth, and appears likely to be useful in broadcast cultivation.

A very convenient tool for the use of the lime-burner has been lately introduced here, which answers the double purpose of the rake and the shovel, for separating the stones sufficiently large for burning, from the small rubbish. It is shown in pl. III. fig. 2.

The "Moulding Sledge" is a useful implement for levelling the small inequalities of meadow and pasture-land, and spreading the dung dropped by the cattle. It is a frame of wood, as shown at pl. III. fig. 3, about five feet square, (the sides of which are about four inches thick to give it weight and strength,) having three bars of iron fixed to the lower side, the fronts of which are thinned to sharp edges. When in use, some thorns are drawn *under* the hinder wooden bar, and *above* the middle one, to which they are fixed by cords. If it is wanted to be removed from one field to another, it is turned the other side up, which preserves the edges of the bars from injury. It is drawn by two horses, and will go over a great extent of land in a day.

But the most beneficial substitution of mechanical power for manual labour, which has ever been adopted in this Riding, is the machine for thrashing corn. It is becoming now very general on the considerable farms throughout the district, and labourers have commonly so great an objection to thrashing with the flail, not to mention the high wages required for it, and the difficulty of making them thrash clean, that where much corn is grown, it is become nearly indispensable. The general principle upon which it is constructed is the same as those of Scotland, but every maker introduces some little alteration or improvement according to his abilities and mechanical knowledge, and there is reason to suppose it capable of still farther simplification.

The first machine for separating corn from the straw which was introduced into this Riding, was erected for Miles Smith, Esq. the former possessor of Sunderlandwick, near Driffield, about twenty-five years since, by Mr. Raistrick, of Morpeth, and performed it's work tolerably well; the principle on which it was made is not known; it had, however, a large open drum, and it's motion was too slow to separate completely the corn from the straw. It is now gone to decay.

CHAPTER VI.

INCLOSING, &c.

SECT. I.—INCLOSING.

THE taste for inclosing has been carried on with great avidity in the East-Riding, and more acts of Parliament have been obtained for that purpose during the last thirty years than at any former period. Indeed, very few uninclosed townships now remain in it. There are, however, two descriptions of country and species of property, which are the general objects of acts of inclosure, but which differ materially, both as affecting the public and the proprietor of the soil. This difference, which has by no means been sufficiently considered, is particularly worthy of the attention of the proprietor, who is to look for reimbursement of the expense bestowed upon the lands inclosed. It has been a general principle, that *all land not held in severalty ought to be inclosed*, without sufficient regard being paid to the difference between inclosing and improving lands actually waste and unproductive, or approaching to that state, (as moors, marshes, fens, and commons, having no owner but the lord of the soil, or of the manor,) and open arable-fields, where the land is the absolute property of individuals who are only limited as to the mode of cultivation; or stinted pastures, which are so far absolute property, that each is entitled to the pasturage in cer-

tain

deration, were it not that at this time but a very small part of this extensive tract remains uninclosed.

This country was heretofore entirely open, with the exception of a few small garths attached to the respective villages. Of these villages each was surrounded by a large arable-field, which was portioned into several "*falls*" or divisions, annually cultivated in a fixed rotation of crops. Beyond this, was an "out-field," cultivated only occasionally, but serving as a stray for sheep, when not in cultivation; and a large extent of sheep-walk, which never was tilled, but stocked in proportion to the quantity of arable land possessed by each individual. Such was the general description of the lands of each village. The arable lands were frequently under a bad rotation of crops; but the introduction in latter times of clover, turneps, &c. have in some instances brought them to a very productive state, requiring little more than a perseverance in the system to render them nearly as profitable as they are capable of being made; taking into consideration the great expenses attendant on an act of inclosure, together with the diminution of productive land by highways, fences, &c.

The out-field remained in it's original barbarous state; a crop of oats being taken from it at stated intervals, perhaps once in seven years, when it was laid by without grass-seeds or manure, for time and the elements to bring it about again. Thus it could not be otherwise than in an exhausted state.

But in the ancient sheep-walks and pastures lay the great temptation to inclosure; for it was discovered that these pastures, (many of which had never been ploughed, and none of them perhaps within knowledge,) when broken up, were for some years wonderfully

fully productive of corn; and that during this term they would amply repay all expenses of inclosing them, as well as the other lands, in which no great improvement of rent or produce could be expected.

Mr. Leatham, in the original Survey of the East-Riding, has pointed out some of the consequences of inclosing upon such principles, and the impolicy of planting quickwood hedges where Nature has for ever prohibited their growth. "Many open-fields and "commons in this district have been inclosed, and the "value of the land has not only increased proportion-"ably above the original rent, but has paid 5 per cent. "for the money laid out; but this observation does "not attach to all. Either from the proprietors' want "of knowledge and reflexion on the nature and situa-"tion of the land, or from the sinister views and en-"deavours of a solicitor, and from the train of jobs "which inclosures, when ill conducted, needlessly "create, much land on the Yorkshire Wolds has "been inclosed, which, for the above reasons, might "have been with more advantage left open." p. 37.

"The fences on the Wolds are formed of quick-"wood, defended with posts and rails in the usual "manner, which in many parts of the Wolds, where "the soil is good, and the elevation moderate, thrives "well; in those of a different description the planter "will vainly attempt to raise it: many thousand "pounds have in this manner been ignorantly thrown "away." p. 24.

The consequences have been, that in many of the high Wold townships, which have been inclosed twenty years and upward, where the soil lies shallow above the chalk, the land which was formerly the arable-field is little improved in it's general produce, and yields less corn than before the inclosure, in consequence of some parts of it being applied to other purposes; the out-fields have been found capable of little improvement, from the long series of exhaustion they had previously suffered, and the impossibility of procuring manure in these remote townships; but the ancient sheep-walks and pastures, from producing an herbage, and exhibiting a verdure almost unequalled on any other downs in the kingdom, are become nearly unproductive. Thousands of acres thus exhausted, might be instanced, and many more thousands are hastening to the same irrecoverable ruin: for this soil, at first so liberal of it's fertility, is soon impoverished, and the country affords nothing whereby to restore it; *but many living at the period of the inclosure have made fortunes by it, while the owners of the soil are now left to lament their loss* [m].

In

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[m] "Landed gentlemen in general are tenacious of their old grass-"land, and with good reason; even though it might for a time be "worth thrice the value in a state of aration. All sward, unless the "soil be singularly good, the management extraordinary, and the ma-"nurings frequent, will in time become unproductive; nevertheless, "it may be more prudent, in men of landed estates, to hand down "their old grass-land to their successors in the state in which it is, "than to permit it to be broken up and reduced by improper treat-"ment to a state still less valuable. And were there no means of "avoiding the evils of improper management in tenants, landlords "would be fully warranted in a rigid refusal of their requests to break "up such grass-lands, though they were unproductive and unprofit-"able.—But, in the management of an estate, *grass-land and hedges* "stand in nearly the same predicament. It is the tenant's interest to "*injure* them, and the landlord's business of course to look to their *pre-"servation.* Marshall's Yorkshire, Vol. II. p. 89.

Though this refers to land in the full dominion of the owner, it is equally applicable to land obtained in severalty under acts of inclosure;

In inclosures of this nature have vast capitals been uselessly consumed in posts and rails long since rotten, and quickwood long since eaten up by the sheep; and large tracts of country exhibit no marks of inclosure except the ragged remnants of hedges, which have never thriven, affording only the remembrance of verdant sheep-walks now reduced to barren wastes; capitals, with which landed proprietors might have improved their improvable property, and which they might have held without the incumbrance of a debt which they are unable to discharge[n].

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sure; but such land is too frequently so obtained for the sole purpose of being plundered and destroyed.—W. S.

[n] It is true, that many inclosures on the Wolds, and at the foot of them, have failed of being beneficial to the owners; but if such failure were thoroughly investigated, it would generally be found that an almost total neglect of the improvements which had been made, (especially that of cleaning and maintaining the fences,) and also an improper course of cropping, have been the principal causes. Land of a middling quality, covered with a bad swarth, like a great proportion of the Wolds when in their natural state, need never be injured by being ploughed, especially if the soil is suited to turneps and grass-seeds; but if the tenants either by not being under proper covenants, or breaking good ones, are suffered with impunity to take two or three crops of white corn successively, and continue the land in an arable state for many years without laying down to grass, which has been very commonly done upon the Wolds, exhaustion must be the consequence.—For want of landlords insisting upon covenants of leases and agreements being more strictly complied with, both they, the public, and the tenants are great sufferers. The law between landlord and tenant is so difficult to be obtained in a reasonable time, that rather than wait for an uncertain decision, the former puts up with the injury, which hardens the latter, and encourages others to act in a similar manner.

It is very common for the proprietors of estates, after they have been at a great expense in planting fences, to leave the future care of them

The benefits derivable to both the community and the individual from the cultivation of waste grounds, and the laying into severalty of the common field lands, where it is done with judgment and a proper regard to soil and situation, are now become so obvious, that it is superfluous to enlarge upon them; but the particular system of inclosing, as pursued here in many instances, is in itself productive of a variety of inconveniences to both. Too much power is in general vested in the hands of the commissioners, by the parties interested not agreeing sufficiently among themselves beforehand upon the express terms of the inclosure, which ought to be inserted in the act, as much as possible, in special clauses. This would obviate many of the complaints and disagreements which commonly occur upon inclosures taking place, and would, in a great degree, relieve Gentlemen from the necessity of surrendering the management of their estates for an unlimited term (in some instances eight

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them to the tenant, without paying sufficient attention to the performance of his duty; the consequence is, that by some of the rails getting displaced, the sheep have access to the quickwood, and it is soon so much injured, as even, with all possible future care, to require some years to restore it. The failure of many inclosures may be attributed to these causes, rather than that the soil or climate is inimical to the growth of quickwood.

A great injury is frequently done to those fences on the Wolds, which have by care and great expense been got into a good state, and affording excellent shelter, by the tenants' chopping them off the height of two or three feet from the ground; thus they undo in an instant what they have been endeavouring to accomplish for fifteen or twenty years before, and they are from that time rendered nearly useless as a fence against sheep, by the strength of the stools being expended in producing a great number of shoots from their tops, and become nothing but a row of stakes at the bottom.—J. T.

eight or ten years) into the hands of a set of men, whose interest it is to retain it as long as possible in their possession. But the impropriety of leaving the whole direction of the inclosure to the uncontrolled power of the commissioners is most strongly deducible from the inconvenience daily experienced by the public in the laying out of the roads; instances frequently occurring where the traveller is compelled to go half a mile, a mile, and even two miles out of the ancient direct road, for the sake of preserving the form of a field or a farm, or saving to the township the making of a few hundred yards of road. For the same reasons, in other cases, the road is laid out in a direct line, up hill and down hill for several miles successively, when, by a very little deviation, many steep ascents might have been avoided. This branch of the direction of an inclosure should be vested in a practical civil engineer, who ought completely to stake out all the public roads passing through the township to be inclosed, before the commissioners take a single step toward allotting or apportioning the land itself. Until a clause of this nature is made essential to all acts of inclosure, the evil complained of will continue to exist; as the commissioners, being appointed by the proprietors and not by the public, will always think it their duty, in the first instance, to serve their employers.

SECT. II.—FENCES AND GATES.

Very few old fences are to be met with in the greater part of this Riding, the inclosures having nearly all been effected within the space of forty years.

Upon these the fences are chiefly made in the form described in fig. 1. pl. IV. at an expense per rood of seven yards, according to the present (1811) rate of labour and materials, nearly as under; varying, however, from local or accidental circumstances:

	s.	d.
Casting the ditch 2½ feet deep, 3½ feet wide at top, 6 in. at bottom, planting the quickwood, and setting the posts and rails, from 1*s*. 4*d*. to 1*s*. 8*d*. according to the nature of the soil, &c. - -	1	6
2½ oak posts, at 8*d*. each - -	1	8
5 nine-feet rails of foreign fir, 3 inches by 2 inches [o], at 10*d*. each, or the like number of riven oak or ash rails at 7*d*. each, per average - - -	3	6½
Quickwood, 70 plants per rood, at 18*s*. per thousand - - -	1	3
	7	11½

If the guard-fencing, here called "deuces"[p] be added to it, the additional expense will be from 1*s*. 6*d*. to 2*s*. per rood.

Where a fence is wanted for a plantation, a garden, or any other situation, secure from the injury of cattle on the inner side, the fence described in fig. 2, pl. IV. is extremely appropriate; as the quickwood is completely

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[o] The rails ought to be three inches square, and put into the post with an angle upward; in this manner they will last more than double the time of a flat rail.—H. S.

[p] "Deuces and trays," from their being *two* long thin rails, and an upright strengthening-post in the middle, which, with the two posts at the ends, form the "tray" (trois).—F. W.

Pl. IV

Fig. 1

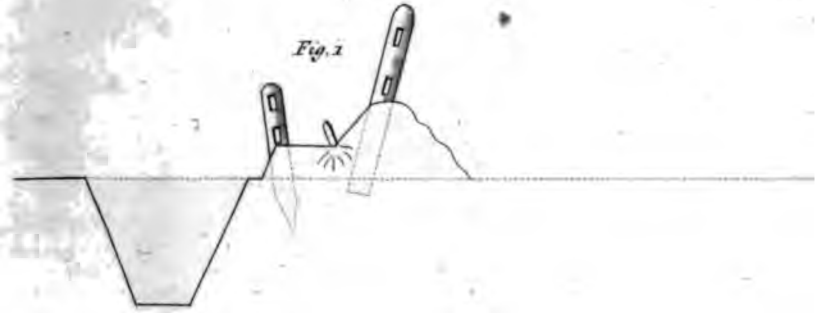


Fig. 2

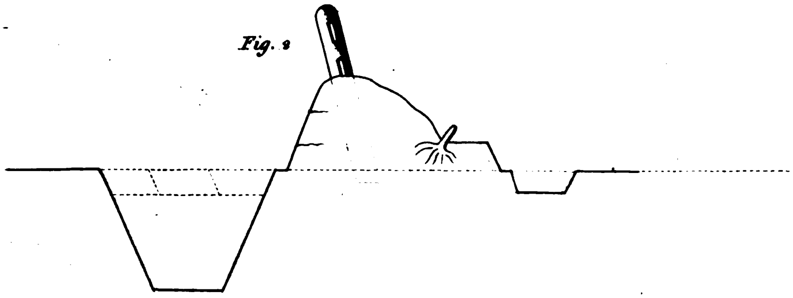


Fig. 3

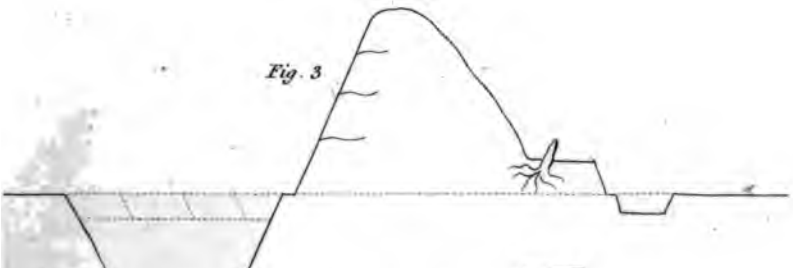
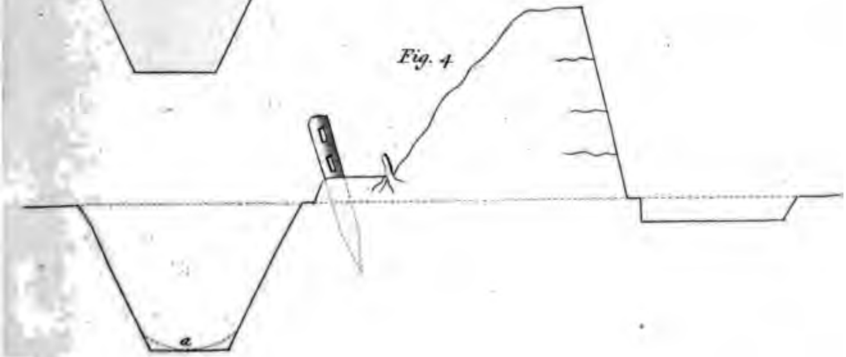


Fig. 4



Neele sc. Strand.

completely defended without the additional expense of guard-fencing. As additional labour, however, is required to the two sods in front of the bank, it will cost about four-pence per rood more than the preceding method, exclusive of the guard-fence.

But where sods can be obtained, the two following modes of making a fence appear to be not only the cheapest, but by far the most effectual, both as fences and as nurses to the young plants. They are very little in use here, but are generally so in the counties to the north of us. Fig. 3, pl. IV. is used in situations similar to fig. 2, where one side is secure from cattle; the expense of making it is nearly as under:

	s.	*d.*
Casting the ditch 3 feet deep, 4 feet 6 inches wide at top, 1 foot wide at bottom	2	0
Setting the sods 4½ feet high - -	1	0
Turning the cape-sod, and planting the quickwood - -	0	4
Quickwood, 70 plants per rood, at 18*s.* per thousand - - -	1	3
	4	7

The other method fig. 4, pl. IV. is applicable to fences in general, and may be made of the same dimensions as the above, for about five shillings per rood, as a little additional labour is requisite in taking the sods for the bank from the back of it, instead of from the ditch.

These two last mentioned methods, it is found, by affording so much shelter to the quickwood, induce a much speedier and more perfect growth, and form in the interim a more complete fence, at little more than half the expense of posts and rails. The curved dotted line *a*, fig. 4, is what the drainers call a "tray-bottom," and is much preferable to the flat one in all springy or loose sandy situations, which are liable to slip in at the sides.

The practice of planting timber-trees in the fences of the new inclosures is unfortunately very much neglected here; a vast supply of timber is thus lost to the community, a considerable source of profit to the landlord, and (what the East-Riding is most destitute of) shelter to the land, as well as ornament to the neighbourhood: all these considerations, which might be obtained *for nothing*, are overlooked from the mistaken idea of timber being destructive to quickwood. Under the shade of Beech few plants grow well, but all the other deciduous timber-trees may be planted with little or no injury to the hedge, if they are not placed so near to each other as to meet and produce a close shade; and even should they weaken in some degree the growth of a few plants on each side of them, the injury is more than overbalanced by the advantages obtained.

But if the planting of hedge-row timber be objected to in making the fences of new inclosures, much shelter, as well as a good supply of timber, may be obtained at a very trifling expense or loss of land, by taking off the angles of every field (which are of littl value in tillage) for a plantation, and at the time o making the fence, instead of running it quite throug to the angle, turning it across the corner to the ne fence. Thus, where the corners of four fields meet one point, a considerable plantation will be obtaine with very little increase of fencing or loss of groun and four fields will derive shelter from one plantatio and, if the plan is pursued farther, every field will have shelter from every wind. The trees also, from the compact form in which they are planted, will shelter each other, and thrive much better than if the same quantity of land were planted in a narrow extended line, as is often practised. If the fences be turned across the angles of four fields (being right angles) at ch. 1.10 from the point where they would otherwise cross, it will form a square plantation containing one rood; at ch. 1.58 it will contain half an acre; and at ch. 2.24 one acre, for which the whole additional fencing required will be ch. 3.68.

The gates in common use here are very various in their form. That which is most general, and appears to be constructed on the best principles for resisting injuries of different kinds, is shown in fig. 1, pl. III. The "heel", *a*, is five inches square, and the "head" *b*, three and a half; the bars at the head two, and at the heel two and a quarter, with all the angles taken off; the brace *c*, is dove-tailed into the top of the heel, and a rivet, or a small screw-bolt, is put through the brace, the bar, and the upright at *c*; the stay *d*, is let into the bottom of the heel, the other end of it abutting against the stay at the bolt, thereby forming an arch which, if the gate is properly put together, will effectually prevent it from settling out of square.

The hanging of gates is a point in rural economy little understood, and imperfectly executed; it may, therefore, be useful to introduce here a concise abstract of the principles laid down in Mr. Parker's elaborate and ingenious Essay upon that subject, and a few practical directions for performing that necessary operation; as it should be remembered that, however well-constructed a gate may be, it can never perform it's office effectually unless it be properly hung.

THE LINE OF REST is that point to which the gate would naturally fall, if uninterrupted by the post, and which it has always a tendency to approach. THE LINE OF EQUILIBRIUM is the opposite point, or where it would remain if moved half a circle from the point of rest; and where it would balance; and upon the slightest deviation from which it would immediately approach the line of rest.

When a gate is in it's line of rest, or it's opposite line of equilibrium, the two hooks by which it is suspended will be in the same vertical plane with it. Thus, in fig. 1, pl. V. are represented an horizontal section of a post, and the hooks of a gate as seen from above, and at *a b* the LINE OF FASTENING, or direction of the gate when shut; let *b c* be the line of rest, and consequently *d e* of equilibrium; the gate, when at *b c* or *d e*, and the hooks *b d* are in one vertical plane; hence by altering the proportionate lengths and positions of the hooks, the line of rest and equilibrium will be altered.

A gate, when properly hung, should have it's line of rest about $\frac{1}{16}$ of a circle, or 22° 30′ beyond the line of fastening; thus if *a b* is the line of fastening, the hooks ought to be so adjusted, as that the line of rest will be at *b c* 22° 30′ beyond the former; now as the line of rest falls at *b c*, the line of equilibrium will be at *d e* or 22° 30′ short of the greatest extent of the gate's opening *b f*. In order to secure the gate from remaining open at the equilibrium, a stopping-post should be put into the ground, (to which a hook may be attached, to keep the gate open when required,) which will prevent it from opening beyond *b g*, or

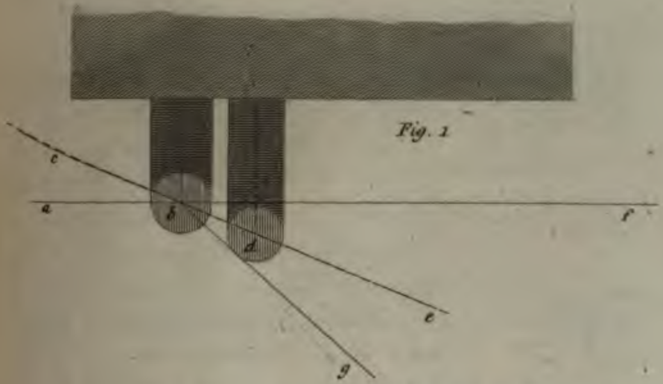


Fig. 1

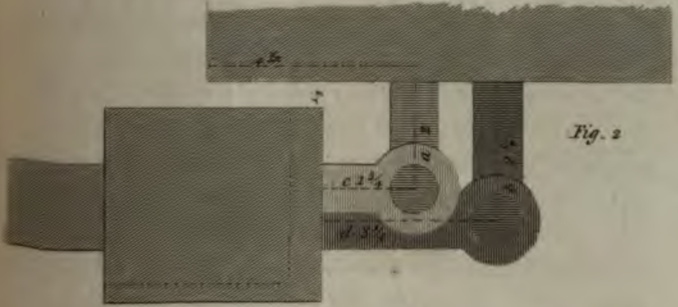


Fig. 2

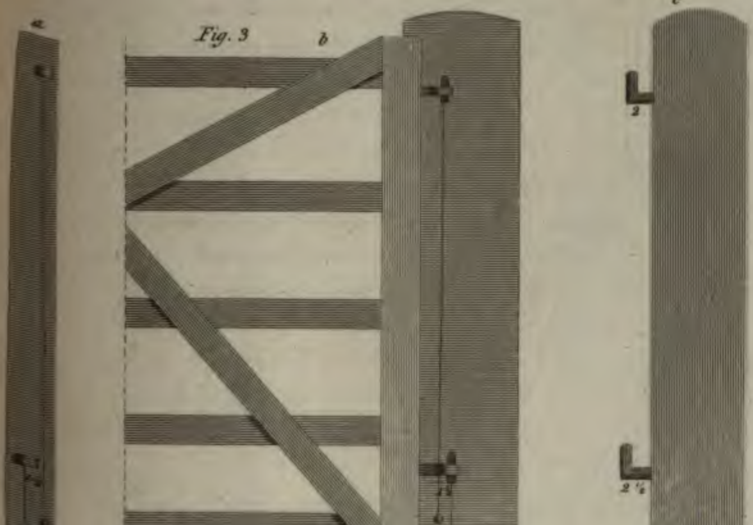


Fig. 3

A.S.

Neele sc. Strand.

22° 30′ short of the line of equilibrium *d e*. A gate hung in this manner cannot be left open, (except in very high winds,) as it will shut by itself from any part of it's range of 135°.

When closed, the gate should hang perpendicularly, and the bars be perfectly horizontal.

These being the general principles, it is requisite in the next place to show how they may be reduced to practice in an easy and simple manner. The gate-post being fixed in the ground as firmly and perpendicularly as possible, let the upper hook be driven in about four inches from the inner edge of the post, allowing it to project two inches from the post to it's centre (see fig. 3, *b* and *c*, and fig. 2, *a*); then at forty inches below that, the lower hook must be driven in one and a half farther *from* the gate than a perpendicular line from the centre of the upper one, fig. 3, *b*, and fig. 2, *b*, and it must project two and a half inches from the post, see fig. 3, *c*, and fig. 2, *b*. The loops, when driven into the heel of the gate, must be so adjusted as to keep it upright when shut; the upper one not being driven into the middle, but one-fourth of an inch *nearer* the post, as at *a*, fig. 3, and *c*, fig. 2, and it must project one inch and three-fourths, see *b*, fig. 3, and *c*, fig. 2. The lower loop must be driven in one-fourth of an inch on the other side of the middle, or one-half inch farther from the post than a perpendicular line from the centre of the upper loop, as in *a*, fig. 3, and *d*, fig. 2, and it must project three inches and one-fourth, or one inch and half more than the upper one *b*, fig. 3; that is, as much more as the lower hook is out of the perpendicular line of the upper one See fig. 2.

If the heel of the gate should vary from the dimensions in fig. 2, the upper hook must be accommo to it, so that it shall in no case project less thar the thickness of the heel; and if so varied, care be taken to proportion all the other parts to prevent the gate from binding against the post shut, from which it ought to hang about half ar distant. After the gate is completely hung, th thing to be attended to is the placing of the stop post: This is a short post fixed firmly into the g in the angle of 135° from the gate when closed, a about half the length of the gate from the post, t sure it from remaining open by getting past th of equilibrium.

It is necessary here to observe, that the propo given in the latter part of this discussion, will not the lines of rest and equilibrium exactly in the tion described in the general principles first laid c for though these are right in theory, they are not in practice to give the gate sufficient fall to ove the power of the wind, and any other slight obstr to which it may be liable.

The annexed table exhibits at one view, 1st, th portions prescribed by Mr. Parker, which are th tically correct, though practically liable to obs which interrupt their application; 2d, the propo which are found most applicable to general purp and 3d, a scale for procuring a still greater fall, should be found necessary in particular situations

		Loop.	Hook.	Distance o the post.
		Inches.	Inches.	Inches.
1.	Upper................	1¼	2	1¼
	Lower................	3	2½	
2.	Upper................	1¾	2	1½
	Lower................	3¼	2½	
3.	Upper................	1¾	2	1¾
	Lower................	3½	2½	

CHAPTER VII.

ARABLE LAND.

SECT. I.—TILLAGE.

FROM the great variety of soils in this district, and of their respective situations and elevations, a great variety in the proportions of tillage to grass, as well as of the modes of cultivation, is naturally to be expected. On the Wolds, a country peculiarly adapted to sheep, and from various circumstances unfavourable to corn, particularly to wheat, a stranger would be surprised to see at this time at least two-thirds of the land under the plough. This district, till of late years, had continued for ages in the open-field state; and a few townships still remain so. They were usually divided pretty equally into a tillage-field, a common pasture, a sheep-walk, (which never came under the plough,) stinted in proportion to the number of oxgangs[q] in the tillage-field, and an out-field from which a crop of oats was taken every third, fourth, fifth, or sixth year; and which was left, without either manure or grass-seeds, to be depastured with

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[q] Oxgang. A term applied to a certain proportion or division of the open-field land, but of no specific quantity, varying in different townships from about eight to upward of twenty-two acres, according to the quantity of land and the number of oxgangs contained in the respective aggregates.—H. S.

The average proportion of the tillage-land on th Wolds, at present, may therefore be taken at full tw thirds.

In Holderness something more than one-third under the plough; toward the south-eastern e tremity considerably more, probably amounting to on half.

In the district of Howdenshire with Ouse and De went, a considerable proportion of barren, sandy, an peaty lands, producing little except a miserabl dwarfish growth of ling *(Erica Vulgaris)* and inc pable of any profitable cultivation, and some exte sive tracts of woodland, lessen very much the quanti of cultivated land; the proportion of tillage-land ma therefore be considered as somewhat below one-thir

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servient to the general purpose of the farm, viz. that of sheep. I stead, therefore, of taking a crop of rape-seed and two crops of co after paring and burning, before a crop of turneps, which is often don it would be better on the more fertile lands to pare and burn for, 1 turneps, 2d oats, 3d turneps, 4th oats or barley, with grass-seed and then let them remain two or three years in grass. On those whic are less fertile, to pare and burn for, 1st turneps, 2d turneps, 3 oats, 4th turneps, 5th grass-seeds with rape, or rye and tares, eati off all with sheep, and then let them remain in grass as long as th continue productive. During the courses, the land should be well lim for some of the turnep crops. I know many farmers will object these courses of crops, and say, "What are we to pay rents with?" answer, that on a sheep-farm, corn ought not to be the chief sourc the rent. Sheep are what ought to be depended upon; a good c of turneps on a sheep-farm is more profitable than a middling cro corn; and the greater the fertility of the land, when sown dow grass, the greater quantity of stock it carries, and the better they fed: thus a greater profit ensues, and the land, on being again ploug out, produces better crops of turneps and corn, with less expense, t if it had been exhausted by the production of more crops of rape a corn.—J. T.

The Vale of Derwent is in general fertile in soil, in a good state of cultivation, and enjoying a pretty regular course of crops, in the proportion of one-third tillage and two-thirds grass.

Formerly the arable ground, in the open common fields, where each occupier seldom possessed more than one or two contiguous lands or ridges, was raised remarkably high, by continually ploughing toward the middle of the ridge, either with the view of keeping the soil and manure from the neighbouring ridges, or from the mistaken notion that the land would in moist situations be thus rendered drier. But both in dry and wet situations great injury ensues from this practice. In dry ones, the summit of the ridge is parched by the summer's drought, and the furrow is sterilized by being laid upon the rock. In wet grounds, the evil is still more considerable; half the land is deluged with water during winter, which the drains have seldom fall enough to carry off, and the surface-draining requires so deep a cut across the ridges, that the expense is greatly enhanced, and the liability to crumble is much increased. In the new inclosures, this absurd practice has been generally discontinued from the enlargement of ideas which the inclosure of a township generally produces in it's inhabitants; but several instances still remain, particularly in Holderness.

On the clayey and chalky soils, it is the universal practice to plough in autumn, with a deep furrow, the stubbles which are intended for fallow the succeeding summer. This practice is attended with very beneficial effects, as it mellows the soil, and renders the eradication of the root-weeds an easy operation; at the same time, by pulverising it, the seed-weeds are but on the very tenacious warp-land on the banks of the Humber, on Sunk Island, and on the poor cold retentive clays, which lie at a great distance from lime and manure on many parts of the eastern coast of Holderness, bare fallows cannot be altogether dispensed with. It is at the same time, however, observable, that in many parts of this district fallowing is practised, where drilled beans or tares might be substituted with the greatest advantage to the occupier. All land, which cannot be reduced to a fine tilth by the end of May, is unfit for cultivation under fallow crops; and can only be kept clean by a bare fallow occasionally intervening in the course of the rotation; though, by introducing drilled beans or tares into the course, it is possible to defer its recurrence to a more distant period than is now practised.

No department of agriculture has occasioned more discussion than that of fallowing, and the subject seems to have undergone a thorough investigation. Formerly it was held, that fallowing was requisite on all lands, and in all situations: but the friends of the practice now seem satisfied that stiff, heavy cold lands alone require a naked fallow, and that upon all other lands green crops are a better substitute: reasoning produced no conclusions; fair experiments seem for the present to have decided it. It is not however improbable, that future improvements may be struck out, which will banish naked fallows from every soil, and substitute green or fallow crops in their place.

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[*] from repeated experience, when clover is sown in wheat after beans, the grey snail is so abundant as to injure greatly the young plants, and in some cases totally destroy them.—J. L.

place. How these shading crops operate in ameliorating the soil, has not been ascertained by agriculturists or chemists. It may be that the rays of the sun penetrating the soil in summer, evaporate the fertilising particles, which the atmosphere in shaded situations is continually supplying to it: hence, broad-leaved or succulent plants, by their shade, assist in retaining what would otherwise be drawn off, and must be much superior to a bare fallow as improvers of an exhausted soil; while the green food thus produced will be obtained at little more than the expense attending the latter. But to derive the greatest benefit from crops of this nature, they should be so cultivated, as to allow of the intervals being repeatedly stirred and turned over, thus presenting the greatest possible surface to the fertilising influence of the atmosphere." This will be best accomplished by drilling, and frequently exposing a fresh surface in the intervals[*].

The fallows on the Wolds undergo four ploughings. The first usually takes place in December, when they are ploughed deep, and remain in that state till after the season for sowing turneps in July; they are then manured with long fold-yard manure, and ploughed lightly over, merely to cover the dung; in August they are ploughed a third time rather deeper, and in October the wheat is sown upon the surface, and ploughed in with a light furrow.

On the strong lands of the Riding, five furrows are usually given to them, and they are limed at the rate of about four chaldrons (of 32 bushels each) to the acre; but on some old tillage-fields, which have been long under the plough, a much greater quantity is applied, even to the amount of seven or eight chaldrons to the acre. Some cultivators apply only three chaldrons of lime per acre, along with a moderate quantity of fold-yard manure; and this appears a more judicious, as well as a much cheaper practice.

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[*] A very excellent Paper upon this subject is inserted in the Annals of Agriculture, Vol. III, p. 97, by the Rev. J. Fiske, of Shimpling, near Bury, Suffolk.—H. S.

SECT. III.—ROTATION OF CROPS.

To enumerate every variety, in the rotation of crops in the East-Riding, would almost be to state the practice of each individual farmer in it; as scarcely two can be said to follow precisely the same course for a succession of years, except in the few remaining open-fields, where all are bound to pursue the same system. In many cases, the nature of the soil or situation, or the particular application of the farm, are strong and sufficient reasons for the variety; in other and not unfrequent instances, the whim, the ignorance, or the avarice of the occupier, the restrictions of the landlord, or the desire for singularity, operate to produce many remarkable deviations from the common path, but such are not worthy of being recorded.

In most of the open-field townships on the Wolds, two crops and a bare fallow have been from time immemorial the constant course; the tillage-field (as observed in the first section) was then divided into six, nine, or twelve falls or fields, so that there might be at least one of the divisions under each kind of grain, and fallow, every year. The course pursued, was, *generally*, as follows:

1. Fallow,
2. Wheat,
3. Oats,
4. Fallow,
5. Barley,
6. Peas, or Beans.

But after the growth of turneps and seeds became general, the open-field farmers began to perceive the advantage of departing, in some degree, from their old system, and have partially adopted improved modes of management, under the powers given in the act before recited. An instance of this occurs in Leatham's Report, page 45, in the following words: "The township of Hunmanby consists mostly of open fields and "commons. The arable land was worn out to such a "degree, by crops injudiciously repeated, that it returned little more corn than was necessary for seed "and the support of the numerous horses employed "in cultivating the soil. The sheep also suffered "from the mismanagement before described; and "poverty was the inmate of every dwelling, though "several of the occupiers were owners also.

"The difficulty of introducing a reformed mode of "cultivation in a township prejudiced in favour of old "customs, and fearful lest every innovation should "prove ruinous, was great, and not easily surmounted. "After many meetings and much temporising, I prevailed upon them, however, partially to adopt my "plan, but not without an express stipulation on their "part for one crop of corn more than I had intended. "I was glad to recede a little, rather than lose the "whole. The following mode of husbandry was "adopted for the open-fields in six divisions: 1st, Turneps sown on a good fallow, hoed and fed off with "the sheep of the occupiers; 2d, barley with seeds; "3d, seeds; 4th, seeds; 5th, wheat; 6th, oats or peas. "It was my wish, that the crop of oats or peas should

" have been entirely omitted, and that the land sown " with seeds should have continued in grass three " years.

" The grass seeds are sown (with the barley) and " are all of one quality, and paid for proportionally " by the occupiers, each of whom stocks them with " sheep according to his proportion of the land " sown.

" The shepherds take care of the sheep, and fold " them each night upon the seeds alternately, so that " the land of every one receives equal benefit. Their " wages are paid, and the nets or hurdles furnished " by the several occupiers according to their respec- " tive proportions. Field-reaves, or masters, are ap- " pointed, to give the necessary orders, to inspect and " regulate the sowing of the seeds, and the conduct of " the shepherds, and to take care that the several " rules and orders are observed. The sheep are " turned into the divisions sown with seeds, on a cer- " tain day previously agreed upon at a meeting of the " field-reaves and proprietors.

" Thus an open-field is enjoyed in as beneficial a " manner, as if it were inclosed; and by a diminution " of the arable part, it is put under that course of hus- " bandry, which will tend to invigorate and preserve " it, the herbage is increased, and the stock more " numerous, and of a superior quality; a greater quan- " tity of better corn is also produced by one-third of " the seed and labour, the part still kept under the " plough is likewise worked with less trouble than " formerly, for fresh land in good condition has al- " ways this advantage over that which is foul and ex- " hausted. Another benefit also attends this mode of " management; two persons are fully sufficient to "attend the sheep stock; whereas were the lands in-"closed, this stock would be divided into several "parcels, and require, in consequence of such divi-"sion, very expensive as well as inconvenient attend-"ance. The precarious rearing of fences also in "this exposed situation is avoided, and the immense "expense of continually repairing them is saved.

"Hence it appears experimentally, that the York-"shire Wolds, and all land of a similar quality and "situation, may be restored to it's former vigour, and "otherwise properly managed without fences; which "in many places it is a force on Nature to attempt. "There are other places, however, where fences are "absolutely necessary, and where, by suitable atten-"tion, they may be raised: there are even few town-"ships where, in some parts, this is not practicable; "which parts are generally adjoining the town, and "should be so inclosed as to form separate accommo-"dations, the more distant for milch cows, the nearest "for draft-cattle.

"The remainder of the land in the township should "be exchanged and flatted, so that the scattered pro-"perty in the open fields might be laid together in "flats, and managed agreeably to the foregoing plan, "with such variations as situation and circumstances "might point out.

"The aid of Parliament would, in some cases, be "requisite to confirm the exchanges, and to render "the plan permanent. The above arrangement was "made under the sanction of 13 Geo. III. cap. 81; "entitled, "An Act for the better cultivation, im-"provement, and regulation of the common arable "fields, wastes, and commons, in this kingdom."

"This

" This act, if attended to, would be of real service,
" and should be revised, amended, and enforced."

Farther instances may be adduced of the benefits and improvements derived by the East-Riding from the above-mentioned salutary statute, which might in many cases supersede the enormous expense of inclosures under private Acts of Parliament.

After inclosures have taken place upon the Wolds, or on the new letting of farms, various rotations are adopted; but the general system is to preclude the tenant from sowing two crops of white corn in succession. The following course is as frequent, and probably as good, as most in use.

1. Turneps,
2. Barley, or Oats,
3. Red Clover, or Tares,
4. Wheat,
5. Turneps,
6. Barley, or Oats.
7. Grass,
8. Grass.

In Holderness, on the clay and strong loamy land, two crops and a fallow form the usual course; wheat on the fallow, and beans (or sometimes oats) after the wheat; but, on the fine gravelly and loamy turnep soil, extending through the middle of Holderness, by Catfoss, Rise, Skirlaugh, Conistone, and Bilton, the course is generally

1. Turneps,
2. Barley or Oats, sown with Clover,
3. Clover,
4. Wheat,
5. Peas, or Beans;

the clover being occasionally exchanged for vetches, or other succulent plants.

On the warp-land adjoining the Humber, the farmers, on first ploughing up a piece of fresh warp, take two crops of oats, spring fallow for rape to be eaten off, wheat or oats, oats, fallow for wheat, then drilled beans: but Mr. John Lee, a very active and intelligent cultivator of warp-land, prefers the following method of taking up fresh land, as his crops are less injured by the grub, and wireworm, to which this land is extremely subject, than by the usual method; viz. plough thin in the autumn, let it lie till the following June, harrow well, then plough a little deeper, sow turneps, or rape to be eaten off, two crops of oats, fallow, and drill wheat with seeds. This practice, though a little more expensive in the commencement, will (he is convinced) amply repay the farmer for his moderation, in the end. A great part of Sunk Island having been embanked from the sea in the year 1799, was let to the present tenants, to crop as they thought proper for the first six years after ploughing up, and to fallow the seventh; after which, they were restricted to three crops and a fallow. The system has hitherto been, 1st year, plough up and sow rape-seed; 2d, a crop of rape-seed; 3d, wheat; 4th, oats; 5th, wheat; 6th, oats.

In Howdenshire, along the course of the river Ouse, is a tract of exceedingly rich warp-land, of a similar character, though superior quality, being generally less tenacious than that which is found in the neighbourhood of Sunk Island. It extends, in general, about two miles in breadth, and is usually cultivated with wheat, oats, beans, potatoes or fallow; but flax and rape-seed occasionally intervene. Parallel to this warp, but more inland, is a strong yellowish or greyish clay, much inferior to it in value, from three to five miles in breadth. Upon this, wheat, oats, beans, fallow, constitute the ordinary rotation.

From the clay to the foot of the Wolds extends a barren moorish sand, varying from yellow to grey and

white, all of which has formerly been (and in some cases still remains) covered with poor short ling (heath), or water, which, as the greatest part of Howdenshire is from two to four feet below the tide at high water, is very imperfectly taken off. Great efforts toward the improvement of this sterile tract, and a similar one in Ouse and Derwent Wapontake, are making by some spirited individuals: Sir Henry Vavasour, Bart. and his son Col. Vavasour, have done much upon their farms at Melbourn, by the introduction of buck-wheat, which appears to be a plant peculiarly adapted to soils of this description. The Colonel's rotation on a very light sandy soil is, 1st, break up for oats; 2d, buck-wheat; 3d, turneps; 4th, barley and red clover seed; 5th, red clover; 6th, oats; 7th, buck-wheat; 8th, turneps; 9th, barley and seeds, to remain two or more years. A nearly similar system is pursued upon the farm of Charles Howard, Esq. (which is less valuable land than that of Col. Vavasour,) and is found not only to pay very well, but also to cause a permanent improvement in the soil.

SECT. IV.—CROPS COMMONLY CULTIVATED.

Wheat.

The preparation for the greatest proportion of wheat grown in this Riding, is a bare fallow, although some of our best cultivators allow, that a better and a more certain produce may be expected after a preparatory crop, and for this purpose none is equal to tares mown green for farm-yard consumption. Some is grown upon a clover or seed-grass lay of one, two, or three years old. Where the land is poor, and the lay old

it is usually manured between Mayday and Midsummer, and, as soon afterward as possible, rowed or half ploughed. This is done by turning a thin furrow over the same breadth of unploughed land; the sheep are then allowed to stray over it, and in some cases are folded upon it till October, when it receives a complete ploughing, and is sown. On a good loam, or land in better heart, the lay is pastured, and sometimes folded with sheep, till very near the time for sowing, when it is ploughed up and harrowed to pieces. When the lay to be ploughed up is but one year old, (and red clover alone should never stand longer,) it is found to produce a better crop of wheat if it has been *twice mown*, than if it has been *only once mown and afterwards pastured*. This may probably be attributed (as above suggested) to the exhalation of the moisture, being prevented by the shade of the clover through the whole of the summer[y]. A small number of acres of wheat are produced after turneps or rape, when they can be got off early enough in the autumn; and upon the rich warp-lands of Howdenshire, potatoes, and sometimes a crop of rape-seed, are preparatory crops for it.

Time of Sowing.—From the beginning of October to the end of November is the usual season for sowing wheat;

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Time of Sowing.—From the beginning of October to the end of November is the usual season for sowing wheat; but it ought to be all sown, if possible, before the end of October[z].

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The time for sowing spring-wheat is from the beginning to the end of April: it must not be sown earlier, as it will not bear frost.

Sort.—The variety of wheat usually grown upon the Wolds is known there by the name of the Red Kent, as much of the seed-wheat is annually imported from that county; it is a sort well calculated for an indifferent soil, or for one which has been long in tillage. This kind is also used in Holderness upon the old tillage-land; but on fresh land the Dwarf, or White Kent, is found to succeed better, as it is shorter in the straw, and therefore less liable to be laid. It is not found so productive as some other species, but it generally weighs better than most others. The Hertfordshire Brown is likewise in frequent use in the low-land districts of the East-Riding. The downy wheats, probably from retaining the dews much longer than the smooth ones, are found in the northern climates to be more subject to the mildew[a], and also to sprout or grow in the ear, sooner in wet harvests. The red wheats are generally more productive than the white ones, but they command rather less price in the market. The *Triticum Æstivum*, or Spring-Wheat, is beginning to be cultivated here, and is found to succeed well in most situations, and particularly to

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[z] Where land is over-run with *Alopecurus Agrestis*, or "Black Bent," I think the latter end of October may be too early.—J. L.

[a] For an account of the effect which the barberry is suspected to have in producing the mildew in wheat, see Marshall's Norfolk, vol. II. pp. 19, 359.—H. S.

excel every other sort upon flat, moist, moory land, in which the autumnal-sown wheat is liable to be thrown out by the frost, beside being extremely subject to mildew, to which disease the spring-wheat is very little liable.

Great attention is paid here to the change of seed, not only of wheat, but of all other grains; as the improvement of the produce both in quantity and in quality abundantly justifies the principle. In purchasing the seed, attention is paid to procure it as much as possible from land of an opposite quality to that upon which it is intended to be sown.

Preparation of the Seed.—Steeping the seed in urine, and afterward drying it by means of quick-lime, is generally practised as a preventative against the smut. Some farmers use a solution of arsenic in water for the same purpose; but as the former method is, when properly performed, always effectual, the use of so dangerous a drug in the hands of careless or ignorant people should, as much as possible, be discouraged. To perform this operation with effect, a large tub must be provided, capable of containing about four bushels, which being half filled with urine, about two bushels of wheat are put in, and stirred about to the bottom with a stick for some minutes, in order to allow the dust and the light grains to float, which must be skimmed off; the liquor must then be poured through a sieve into a similar tub, and the wheat spread upon the barn-floor to be sprinked over with lime. This process must be repeated till a sufficient quantity is prepared for one or two days sowing; more should not be done at once, as by lying long in the lime, it's vegetative powers are liable to be impaired. The hasty method of merely moistening the grain with a small quantity of urine, and not floating it, as is very commonly practised, will be frequently found to fail of the intended effect[b].

Manner of Sowing, and Quantity of Seed.—Upon light fallows it is usual to sow the wheat on the land previously to the last ploughing, and to turn it in with a thin furrow, as by those means it is less liable to be thrown out by the frost. But upon the strong lands, it is always sown immediately after ploughing, and harrowed in. It is also in the latter case occasionally sown in "seed-furrow," which is done in the last ploughing by setting each furrow on edge; the wheat is then sown broad-cast, and falls down the sides of the furrows into rows at the bottom; after this it is lightly harrowed, and comes up almost as regularly as if it had been sown in drills.

The drill-husbandry has made some advances in the best cultivated parts of this district within the last six or eight years. Wheat is usually drilled in rows, at a distance of from nine to twelve inches. From two and a half to three bushels per acre are sown broad-cast, and about one bushel and a half when drilled.

Culture whilst growing.—Rolling with a heavy roller is always practised between the latter end of March and the middle of April, accordingly as the spring-frosts appear to be over, and the land sufficiently dry for the purpose. If the surface has become crusted by the rains, it is broken up by the harrows previously to rolling; after which, hand-weeding by women and children is it's only remaining culture. By some, top-dressing is practised with hand-manures, which consist of pigeons'-dung, soot, rape-cake, or malt-dust. Eating by sheep is also an occasional practice on a light soil and thin crop, as not only making it branch more widely, and fixing it more firmly in the ground, but at the same time producing the effect of a slight top-dressing.

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[b] I put very little faith in these, or any other preparations of seed-wheat; I have known equally good effect supposed to arise from merely washing the seed in a large quantity of water, and skimming off the light and smutty grains; but I believe the best preparation *to be good husbandry and good cultivation.* When preparations of the most opposite natures, when drugs the most powerful and noxious, and means the most simple and harmless, are by different people thought to have the same beneficial effects, there is room for doubting the efficacy of, or necessity for, any of them.—W. S.

Harvesting.—Except in a few of the richest parts of this Riding where the crops are extremely heavy, not only the wheat, but all the other kinds of grain are universally mown with a sithe, within two or three inches of the ground, with the heads laid regularly together, and reclining against the standing corn. They are then bound, and set up in shocks ("stooks") of ten or twelve sheaves each. When the crop is thin and all standing, the sithe with the cradle is used; but if it be in some degree beaten down, yet still mowable, the bow is substituted. A good mower, with either of these instruments, in a moderate crop of corn, will take a breadth of nine feet, and a progressive step of eighteen inches each stroke, and will mow, without any excessive exertion, upward of three acres per day. The mower is followed by a woman, who makes the band, and with the rake gathers a sufficient quantity for a sheaf, which, with the rake and her foot, she places in the band; a stout boy binds after two sithes, or a man and a boy after three. A man will set up the sheaves into shocks, and another draw the swathe-rake after four sithes; for it is the universal custom here to circumstance to mow it *from* the standing corn, and leave it for a few days in the swathe, that the clover, &c. may die before it is bound into sheaves.

Produce.—From three to five quarters per acre; after a good crop of turneps, however, a greater quantity is occasionally obtained[d].

Oats

Are frequently sown upon one earth from old swarth or lay land, which is ploughed up in February a short time before they are sown; when the land is rough by being covered with rushes, furze, or other rubbish, the surface is pared off and burnt, after which the land is ploughed and sown. In many cases they are sown on a wheat-stubble, which being ploughed down early in the winter, the oats are sown in the spring upon the surface, and turned in by a light furrow. Instances, unfortunately, are not wanting of oats being grown twice, thrice, and even oftener in succession. Upon some of the deep peat-land inclosed in Holme Common, and Wallingfen in Howdenshire, it has been usual to pare and burn and grow oats for several years successively; and when the crops began to decline, to pare off a fresh slice of peat, burn again, and sow oats as before, and in this manner from six to ten quarters of oats per acre, have been produced for fourteen years in succession.

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[d] Previously to the last forty years, about which time the inclosures in the East-Riding first commenced, and introduced a prodigious alteration in the system of agriculture, bread, made of barley and peas, was universally used in all the farm-houses, and amongst all the lower orders on th Wolds; and in some places on the clay-lands, where beans were mor generally cultivated than peas, barley and beans were mixed: th former made an excellent, nutritious, and palatable bread; the latte had a stronger and less pleasant flavour, if many beans were used, bu was equally nutritious and wholesome. Both were leavened or fermented, and made moist and light bread, the dryness and heaviness o barley-meal being corrected by the peas or beans. Fashion, howeve has so greatly changed the taste of the people, that probably at th time barley-bread is not to be met with in a single family in the Ea Riding. People are still living who remember wheat so little esteem that where barley was wanted for bread, it was not unusual to give equal quantity of wheat in exchange for it.

Barley is sometimes used by the poor for bread, unmixed with other grain, or pulse, and is then made up into unleavened, thin ca but this is much inferior to the former.—W. S.

Sort.—The Poland, or as it is here called the Level Oat, and the Tartarian, are the sorts generally grown in the low, rich, oat-districts, as being the most productive; the Potatoe-oat, which is a variety lately introduced into this neighbourhood, has been tried in Holderness, but is found less productive in measure than either of the above-named species, though it produces more weight of corn per acre, exceeding by at least twenty-eight pounds per quarter every other species of equal goodness; in consequence of it's want of measure, however, which is the farmer's profit, it is going into disuse. On the Wolds the Friezeland oat is the principal sort cultivated, but on old worn-out tillage it gives way to the common late oat, or the black-oat.

Time of Sowing.—From the middle of March to the first week in May.

Quantity of Seed.—From four to five bushels of Potatoe-oats are sown upon an acre, as they spread or tiller more than any other; of the Friezeland and Tartarian about six, and of the Poland eight bushels per acre. But it is a general rule that the richer the land, the more seed should be sown upon it; or the produce will be a vast quantity of strong straw with very little grain, and that light and worthless.

Culture.—In this district oats receive no other culture, whilst growing, than hand-weeding.

Harvest.—The only particular in which the harvesting of this crop differs from that described under the head *Wheat*, is that when a very heavy or much-laid crop occurs, it is customary to reap it with a sickle, and set it up in single sheaves, which is here called "gaiting." It is a northern practice, much used in Northumberland and Scotland, and under the above circumstances most judiciously. The manner of doing it is by binding the sheaf loosely near the top, then taking it by the top giving it a brisk turn, and at the same time striking it strongly on the ground. By this process the bottom is made to expand, and the sheaf stands firm. After remaining in this position a few days to dry, the binder makes a new band for the first sheaf, which he binds tight in the middle, then loosing the upper band he carries it to the next, and so on through the field; they are then formed into shocks in the usual way.

Produce.—On the warp-land and Sunk Island, about eight quarters per acre may be an average crop; in the rest of Holderness, in Howdenshire, and in the other lowland districts of the East-Riding, about six quarters, and on the Wolds (excepting on land which has recently been occupied as sheep-walk) less than four. The oat-harvest usually commences on the Wolds about the 25th of August, but on the remainder of the Riding about ten days earlier.

Beans and Blendings.

The clay soils of this Riding produce great quantities of beans, which are peculiarly adapted to them, and where, under proper management, they may be cultivated to great advantage; as the improvement effected by them in the nature of such soils may be made the foundation of an excellent course of crops, to the *almost* total exclusion (even in these strong soils) of the expensive and ineffectual system of bare fallows[*].

Preparation.—Towards the south-eastern extremity of Holderness, fallow, wheat, beans, has been the rotation, with very little interruption, for ages. The fallows are ploughed five times, manured, and generally limed with from three to five chaldrons per acre. The wheat-stubble is turned down in the beginning of winter, and the beans are sown upon the surface, and harrowed in. This course begins at the wrong end; for nothing paying so well for lime and manure as beans, they ought to succeed to the fallow, and if they were properly drilled and horse-hoed, the wheat would thrive much better, when the lime and manure were more intimately incorporated with the soil. This practice, however, does not appear to be any where adopted; but as hoeing, both by hand and horse, is now coming into pretty general use, it will probably soon be introduced; for a *clean* crop of beans is all that is required to ensure a *good* crop of wheat.

Sort.

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[*] Both observation and experience prompt me to say, that on the strong soils of Holderness it is absolutely necessary occasionally to summer-fallow.—J. L.

produce will be a vast quantity of strong straw with very little grain, and that light and worthless.

Culture.—In this district oats receive no other culture, whilst growing, than hand-weeding.

Harvest.—The only particular in which the harvesting of this crop differs from that described under the head *Wheat*, is that when a very heavy or much-laid crop occurs, it is customary to reap it with a sickle, and set it up in single sheaves, which is here called "gaiting." It is a northern practice, much used in Northumberland and Scotland, and under the above circumstances most judiciously. The manner of doing it is by binding the sheaf loosely near the top, then taking it by the top giving it a brisk turn, and at the same time striking it strongly on the ground. By this process the bottom is made to expand, and the sheaf stands firm. After remaining in this position a few days to dry, the binder makes a new band for the first sheaf, which he binds tight in the middle, then loosing the upper band he carries it to the next, and so on through the field; they are then formed into shocks in the usual way.

Produce.—On the warp-land and Sunk Island, about eight quarters per acre may be an average crop; in the rest of Holderness, in Howdenshire, and in the other lowland districts of the East-Riding, about six quarters, and on the Wolds (excepting on land which has recently been occupied as sheep-walk) less than four. The oat-harvest usually commences on the Wolds about the 25th of August, but on the remainder of the Riding about ten days earlier.

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from being carried to the stack in an improper state.

The variety of the *Vicia Sativa*, known here by the name of Lentil, and in other counties called "Spring-Tare," is sometimes sown with the beans in the proportion of half a bushel to three bushels and a half of beans; the two grains are easily separable by the sieve, and the straw of the lentil is useful in forming bands for tyeing up the crop. When this is not done, it is usual to twist straw into bands, and carry them to the field for that purpose; and they are sometimes bound by their own straw alone. Beans are sometimes mown with a short strong sithe, but the more usual practice is to cut them with a hook made for the purpose described in plate II.; they are frequently let to be cut at from ten to fourteen shillings per acre.

Produce.—In the lower parts of Holderness the produce may be taken at four quarters per acre; in favourable summers, it is more; but on the Wolds, where however they are seldom cultivated, and in other parts of the country which are not properly bean-land, it does not exceed two quarters[f].

Peas.

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[f] Upon the Wolds, however, where in many places the soil, though not deep, is of a loamy retentive nature, beans might be cultivated to great advantage under some such rotation as the following: 1st, Turneps; 2d, barley, or oats; 3d, clover; 4th, beans; 5th, wheat. The beans to be sown broad-cast, and harrowed in on one-earth: beans after clover rarely fail being a good crop, and if a little lime-compost be given to the clover, so much the better for the succeeding crops; they should be sown as early in the spring as the weather will permit; and as much attention should be given to weeding as broad-cast beans will allow. This is found in many places to be a most profitable course, ensuring good crops of barley, beans, and wheat; if the beans

Peas.

Preparation.—Peas are usually sown under furrow upon a barley-stubble on one-earth, but sometimes on thin poor land after lay, which has been ploughed for that purpose early in the winter; in this case, they are merely sown and harrowed in.

Sort.—The late-grey, from growing so much straw, and being so late in ripening, is very liable to be injured before it is housed, and on that account is, in some degree, giving way to the early-grey, and to a still earlier sort known here by the name of the Partridge-pea, which, though shorter in the straw, is much more prolific than either of the preceding. On the north foot of the Wolds, from Flixton to Malton, some white peas are grown, and likewise about Preston in Holderness, and toward Hull, where the early Charltons are sown in drills at a distance of from nine to twelve inches, and hand-hoed [‡].

Time of sowing.—The late-grey peas are sown from the beginning to the middle of March, the early-grey to the end of that month, and the partridge-pea, from the beginning to nearly the end of April, and even with that late sowing it will be ripe by the middle of August.

Quantity

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beans were dibbled, they would admit of much more perfect cultivation.—S. D.

[‡] There is a sort earlier even than the partridge-pea, and equally productive; it is much grown in Buckinghamshire and Hertfordshire, and is known there by the name of Marlborough Pea: in those Counties it is rarely more than twelve weeks from the time of sowing to that of reaping.—J. T.

Quantity of Seed.—About three bushels per acre; but the early sorts, from being much shorter in the straw, require half a bushel more.

Culture.—Except a few white peas, which are sown in drills in the neighbourhood of Preston, all the peas are sown broad-cast, and nothing is done to them while growing.

Harvest.—The late-grey peas are frequently not ripe enough to be cut till the middle or the end of October. They are sometimes mown, but more frequently reaped with a "peas-hook," pl. II, fig. 2, which takes up the crop with less waste, and leaves out the weeds with which they are too often encumbered.

Produce.—The late ripening sorts are apt to run much to straw, and are not abundant bearers; about three quarters per acre may be considered as a good crop, it is often less. The early sorts being more prolific of grain, frequently produce from four to five quarters per acre.

Vetches.

All the plants grown in this Island under the various names of Gore-Vetch, Winter and Spring-Vetch, Winter-Tare, Spring-Tare, Lentil, and White-Tare, are varieties of the same plant, the *Vicia Sativa*; the appellations, Tare and Lentil, which are frequently given to them by agricultural writers, are erroneous, as implying their relation to the genus *Ervum*, with the characters of which they do not, in any respect, agree[h].

That

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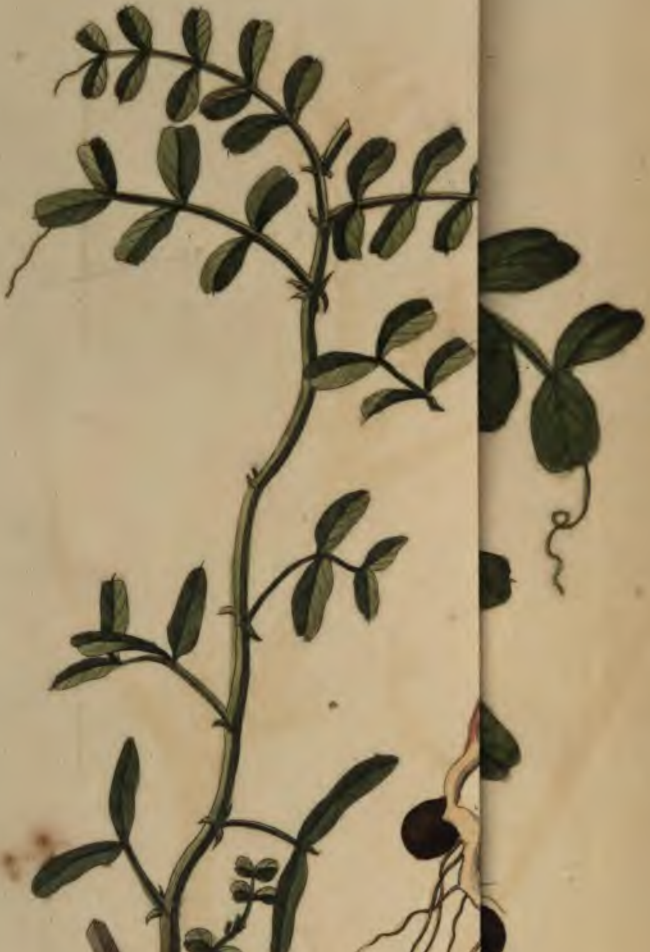
[h] In the Annals of Agriculture, Vol. II. p. 384, is an account of the properties and distinctions of the winter and spring vetches, with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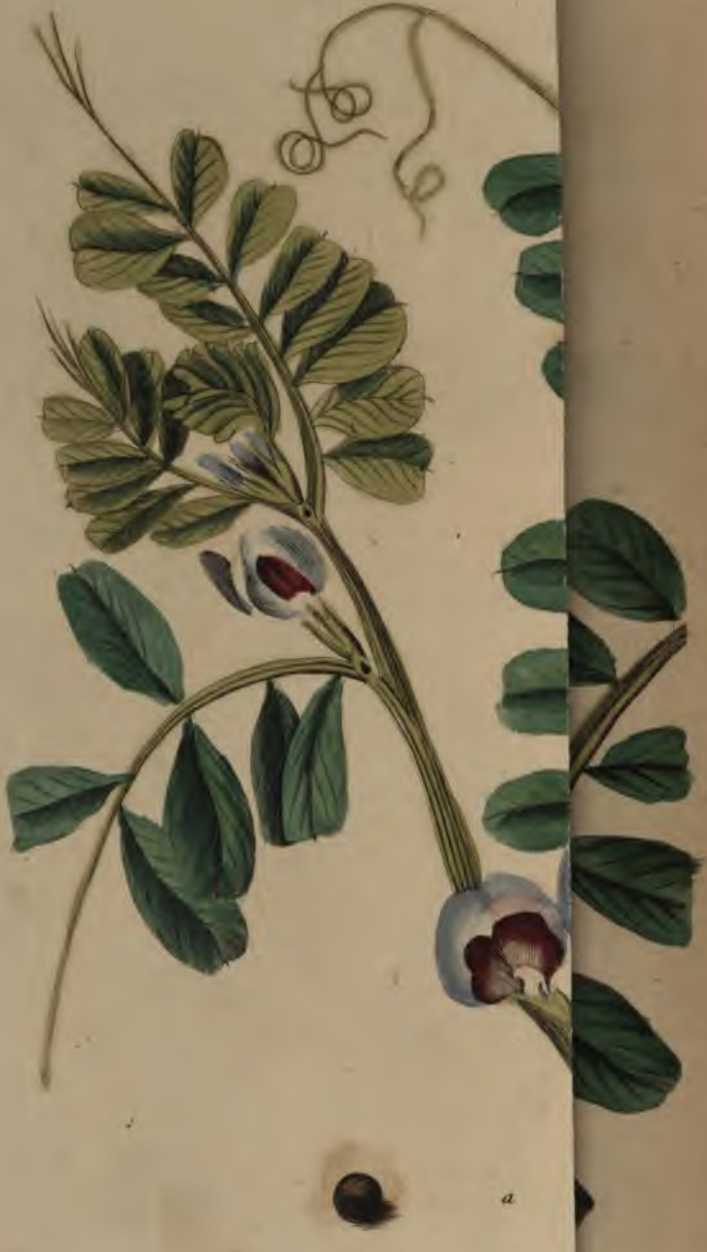
Pl. VII



M.S.

Strand

That variety which is known in the East-Riding by the name of Lentil, has been long cultivated to a considerable extent on the open-fields upon the Wolds, and is still grown upon poor and shallow soils after inclosures have taken place.

Much difference of opinion having existed amongst agriculturists respecting the identity of the lentil and spring-tare, the annexed plates will enable any one to compare the former with the growing plant of the latter, both in the young and mature state. (*a*) Pl. VI. and pl. VII. are the lentil in the two stages of growth; (*b*) in the same plates is the gore-vetch in two states, which being a very vigorous and luxuriant plant, growing naturally amongst the late-grey peas in this neighbourhood, appears likely to prove a valuable plant if brought into cultivation, as it is very hardy, and much larger in it's growth than any of it's congeners.

Preparation.

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with a plate exhibiting the different appearances of the two plants.—H. S.

They are undoubtedly the same plant, somewhat altered in their habit by cultivation. In the Annals of Agriculture, vol. xlii. p. 503, is a paper by Sir John Sinclair, stating, that no account of the culture of lentils has been given in any of the County Reports, and containing queries respecting them, addressed to a farmer in the neighbourhood of Witham Common, (where they are cultivated,) with his answers. Sir John appears to apprehend, that the plant there cultivated under the name of Lentil, differed from the common summer-vetch; but I suspect, that, like the one so extensively cultivated in the East-Riding under the name of Lentil, it is only the summer-vetch, perhaps even without any variation arising from cultivation.—W. S.

The plant called Lentil, in the East-Riding, is very different from that called Spring-Tare, in the southern counties. While young they are strikingly different, the former having a long narrow leaf, the latter a small round one, and grows more bushy than the lentil.—J. T.

Preparation.—The lentil is almost invariably sown on a barley-stubble, and ploughed in very shallow under-furrow at one-earth, and the land afterward very well harrowed.

Time of Sowing.—The last week in February, or the first in March, are the best times for sowing, if the weather permit, but it may be sown with success until the end of March.

Quantity of Seed.—Two bushels per acre.

Produce, and Application.—This plant is peculiarly precarious in it's produce; sometimes a few bushels only are produced on an acre, and sometimes none at all: in other seasons, four quarters and upward. To this cause may, in a great measure, be attributed the uncertainty of the value of it's seed. In the spring of 1808, it was sold as high as six guineas per quarter, and it is now (1810) selling at one-third of that price. The lentil, in consequence of it's producing very little straw, is seldom cut green; and when ripe, it is harvested in the usual manner; and is occasionally given in small quantities to milking-cows, or feeding-cattle. Much is also thrashed out for the supply of seed; it was likewise extensively consumed by the distillers, until the use of it was interrupted by the late unfortunate and impolitic prohibition.

The winter-vetch is considerably cultivated in this Riding, both to cut as green food, and for hay. It is sometimes likewise mown once and then allowed to ripen it's seed, which, if mown tolerably early, it will effectually accomplish. It is generally sown broad-cast, with a small quantity of rye to support it; but in a few instances it has been drilled in rows at a distance of twelve inches, and hoed while young. The judiciousness of this process is evinced by it's success.

Rape.

Much rape is grown in Holderness for the purpose of being eaten off by sheep, as well as for a crop of seed. When it can be fed off early in the autumn, it is generally succeeded by wheat; in other cases by oats. This is a very improving crop to the land, and when good, is superior in feeding to a crop of turneps. When grown upon weak land, however, or sown so thick as to cause it to run up with a small stem, the woody fibres of the stem are liable to become, from the hardness of their texture, perfectly indigestible, and have frequently killed the sheep feeding upon them, particularly when after having been eaten down the rape springs again. The nutritive qualities of this plant are contained in the pith, to obtain which the sheep peel off these outer woody fibres, which are so injurious to them. The thicker, therefore, the stem, and the more luxuriant the plant, the greater will be the proportion of pith. But this luxuriance of growth can in no manner be so easily obtained as by drilling on the flat surface at intervals of from fifteen to eighteen inches, and thinning out the rows by the hoe; a process which does not appear to have been ever attempted[i].

Time of Sowing.—If it be sown earlier than the middle of June, it is apt to run to seed in the autumn; but when the crop is intended for seed, it is seldom sown till August.

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[i] I have drilled rape in rows at a distance of from eighteen to twenty inches, and found it to answer the purposes here alluded to, by throwing out a larger top, and consequently preventing it from growing hard and sticky, as well as allowing full scope for the horse-hoe.—J. L.

Quantity of Seed.—Half a peck is usually sown on an acre, for either purpose. Many farmers are unacquainted with the distinctions between rape and cole-seed, and as the seeds cannot be distinguished from each other, and are often sold indiscriminately for rape by the seedsmen, notwithstanding the plants are extremely different in their properties, it is requisite to be very cautious in this respect. The colour and shape of the leaf is the same in both plants, on their first appearing above ground; but the rape quickly begins to show an upright tendency, and continues to push up a straight stem till it reaches from two to three feet. This plant is therefore better calculated for feeding off, as it produces much more food than the cole-seed, which extends it's leaves flat upon the ground, and does not shoot upward till it is forming the seed-head in the spring: the latter, however, is preferred to the rape, for a crop of seed, as it resists the frost better from it's low growth.

A new variety of rape has made it's appearance in Holderness. It was produced from a cargo of rape-seed imported into Hull from Holland, in the summer of 1803. Many persons, who sowed it at the usual time, found that the whole of it flowered the same autumn, and died from want of warmth sufficient to perfect it's seed. From this circumstance it occurred to some intelligent farmers, that by sowing it as early as possible in the spring, it might ripen it's seed the same summer, which, on experiment, proved to be the case, as the crop was ready for reaping in about ten days after that which had been sown in the August preceding, and proved equally productive. This discovery is of the first importance to the growers of rape-seed; as one year's cropping and rent is saved, and the rape, by standing eight months less upon the land, may probably prove less exhausting. This species appears to have entirely lost the biennial properties of the parent plant, and to be truly an annual, and might therefore be very properly distinguished by the appellation of Annual Rape.

Cultivation.—About Hedon, Pattrington, Sunk Island, and other places, where a strong loam or warp-land prevails, much rape-seed and cole-seed is grown and sent to Hull to be crushed for oil; neither is there sufficient reason to believe, (whatever some may contend,) that on land of the above qualities, in good heart, it is more impoverishing than a crop of oats, provided the land be in the hands of a good tenant, who by proper management and forbearance proves that he has a farther interest in the land than the immediate crop which he is then taking. This opinion is not lightly taken up, but adopted in consequence of some fair experiments made on that subject. Mr. Bell, of Roos, showed a field of apparently uniform quality, one-half of which had been sown two years before with turneps, and the other half with rape, both of which were eaten off by sheep; the turneps were succeeded by oats, and the rape was left for seed, and produced a good crop: in the autumn, after the oats and the rape-seed were off, the whole field was sown with wheat. In the June following, the wheat, after the rape-seed, looked of a fine dark vigorous colour, while that after the oats, though by no means an unpromising crop, bore a much less healthy appearance.

Crops of rape are not unfrequently sown upon breaking up the old sheep-walks on the Wolds; and a great produce is sometimes obtained. But this practice can never be vindicated on land of that quality; the only object of it is plunder. On lands so easily exhausted, and when exhausted (in consequence of their great distance from towns, and all extraneous manures) so irrecoverable, crops which take away much and return little, ought never to be cultivated; great crops of oats produce great quantities of manure, whereas rape leaves comparatively nothing behind it. It is sometimes sown for a crop of seed, on fresh land, pared and burnt for the purpose, and also occasionally on a spring-fallow, in both which cases it is succeeded by wheat. Fresh rich land in Howdenshire is sometimes broken up for flax, which coming off the land early, is sown with rape for seed; and this is succeeded by wheat, as in the former instance. It is not an unfrequent practice to feed off early-sown rape with sheep in the autumn, and afterward allow it to stand for a crop of seed; but care must be taken not to eat it too close, as the produce would be thereby diminished.

Management.—The crop is frequently thrashed upon cloths in the field where it grew, and the straw is burnt to obtain from it the vegetable alkali with which it abounds[k]. This practice, however, cannot be too strongly reprobated, as it robs the land of the little return which the crop is capable of affording. Some of the best cultivators carry their rape-crop to the stack-yard, where it is stacked and thrashed out occasionally, in the manner of corn; the straw and husks are then used as fodder, and farm-yard stock thriving as well upon it as upon straw, much manure is thus produced. There is also another advantage obtained by this practice; the rape, by fermenting gradually in the stack, becomes completely dried and cured, and will not subsequently heat in the heap when it is thrashed; and thus all the trouble and risk of curing the seed, when thrashed in the field, which is very considerable, is avoided.

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[k] For a full account of the manner of conducting a rape-thrashing, see Tuke's North Riding Survey, and Marshall's Rural Economy of Yorkshire, vol. ii. p. 33.

Produce.—From three to four quarters per acre may be taken as a medium crop, though there are many much less, and some few larger.

Turneps.

It is now between fifty and sixty years since this truly valuable plant was first introduced into this Riding, as an article of field-culture. In the course of this period it has produced an infinite improvement in the system of cultivation and the fertility of arable land, and has provided an ample supply of winter food for the maintenance and fattening of cattle and sheep; it may indeed be fairly considered as the only firm basis of good husbandry on all loamy, chalky, or sandy soils.

As in all other new discoveries, the management and cultivation of this plant was at first very imperfectly understood; and as the progress of improvement is extremely slow, it is but of late years that the true system of hoeing and thinning the crop, and thoroughly cleansing it from all weeds, has been generally adopted; and but just now that the (as far as is yet known) perfect mode of management practised on each side of the Tweed, of sowing it on one-bout ridges at the distance of about twenty-six inches between the rows, and nine inches between the plants in the rows, is coming into use. So decidedly preferable is this culture to the broad-cast method, both in quantity and quality of produce, and in the diminished expense of cultivation, as well as in the superior tilth and cleanness of the soil, that it must eventually gain the ascendency: but it will probably be long before old prejudices and practices with the generality of farmers, will give way to conviction. The cultivation and application of this crop being in no respect different in this district from the common management of other turnep-countries, it appears unnecessary to enlarge upon it [1].

A turnep-crop has many enemies to contend with. The moment the plants appear above ground, they are frequently attacked by the fly, which sometimes devours the whole crop; nor though sown a second time, does it always escape. The best preventative of this evil, is every year to save a little seed to mix with the new of the following year; by which means the seed sown will always be one, two, three, or more years old, which coming up at intervals of one or two days, will not unfrequently save a crop when it would otherwise have been lost. On some light moory soils, it is very apt to grow into what is here called "fingers and toes;" i. e. instead of forming one solid bulb, it grows out into a number of small ones, about the size of walnuts, or larger, which are united by small threads like a root of potatoes. In soils of this description, likewise, the wire-worm [illegible] the grub frequently destroy large patches, and the rooks in seeking for these worms pull up many by the roots, though probably such only as have been previously attacked by the worm. Besides all these enemies, it has another of a most formidable character, which occasionally attacks it even after it is hoed, and appears a promising crop: "the black canker," which is the larva of some winged insect, (probably a tenthredo,) appears in myriads, and often devours every green leaf in the field; rolling, lime, or soot, have no effect: the only remedy hitherto discovered is the introduction of a quantity of poultry, which eagerly devour these insatiable invaders.

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[1] For the most approved method of drilling turneps, see the Survey of East-Lothian, p. 140, and of Northumberland, p. 80.

Saintfoin.

There is reason to believe that the cultivation of saintfoin was introduced into this Riding about seventy or eighty years ago by the Osbaldestons, of Hunmanby; as the first field of it, of which any account can be gained, belonged to that family, and lay in that lordship. Soon afterward it was cultivated in several places in the neighbourhood, and the fields, upon which it was first produced, are remembered by people still living. Whoever was the introducer, he performed a signal service to this country, and deserves to be held in grateful remembrance[m].

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[m] In a note under the head "Saintfoin," in Tuke's Survey of the North-Riding, signed Edward Cleaver, Esq. is the following paragraph: "As it has generally been supposed by the farmers that saintfoin is not "a native of England, I am enabled to rectify that mistake by referring them to North-Burton East-field, near Bridlington, where it is "to be seen in abundance, and growing quite naturally."

I think the instance here given is by no means sufficient to establish this plant as a native, as I am in the constant habit of crossing the

lordship,

It is at this time an object of great and increasing cultivation, but has not yet been carried to the extent to which, by the luxuriance of it's growth on land of otherwise little value, and the general deficiency of hay and winter fodder, it is so deservedly entitled.

No plant, indeed, at present known, is equal to it in value upon suitable soils; and there are few situations better calculated for producing it in perfection than the Yorkshire Wolds; as, it peculiarly affects a calcareous earth, with a substratum of open rubble of the same nature to a considerable depth. The cultivation of it has not yet been attempted, as far as can be ascertained, in any part of this Riding, except upon these chalk-hills; but there are other districts of a sandy and gravelly character, where it might thrive abundantly, as it is cultivated with success on similar soils in other places. No soil, in fact, appears too barren for it; it flourishes where scarcely any other plant will vegetate, upon land not estimated at more than two or three shillings per acre, seeking and finding it's nutriment by means of it's descending tap-root, (which has been traced in chalk-pits to the depth of ten feet,) below the reach of other plants; and deriving this farther benefit from the sterility of the surface, that it is less choked or incumbered by the growth of other plants.

Preparation.—As this plant, under proper management,

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lordship, here referred to, in all directions, and I never observed it growing except on land which had been in tillage, and where it had obviously been sown for cultivation: wherever it occurs on the edges of ditches, or the borders of fields now in corn, it may be accounted for by worn-out saintfoin being ploughed up, as it has long been cultivated in this township.—H. S.

ment, remains ten or twelve years in perfection upon the same ground, it is necessary to be particularly careful in cleaning the land previously to it's being sown. For this purpose a crop of turneps, drilled, and properly horse-hoed, (the land having had a good winter and spring fallow,) will be found the most effectual. These being eaten off by sheep, will leave the ground in excellent condition for receiving the seed, which is usually sown broadcast, with a crop of barley. Doubts have been entertained, whether land would bear being sown a second time with saintfoin after the first crop had been worn out: but instances occur which prove the affirmative; and a field known to the Surveyor, has now saintfoin upon it, which has stood many years where a previous crop had stood a still longer time, with only an interval of three or four years[a].

Seed.—If this seed is purchased of the seedsmen, the greatest caution is necessary in the choice of it; for unless it be the produce of the preceding summer, scarcely a seed will vegetate. The grower may, however, preserve it with perfect security to a second year, by letting it stand in the stack unthrashed[b].

New

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[a] It implies no very hazardous conjecture to suggest, that the new tap-roots of the second crop may strike downward in lines generally distinct from those pursued by their predecessors, and thus find unexhausted stores of support; particularly as from the compression of the superincumbent stratum, the nutriment may be drawn less freely at a considerable depth below the surface in a lateral direction.—F. W.

[b] I know, however, an instance of seed growing perfectly well the second year, by having been spread throughout the preceding summer upon the dry but cool stone-floor of a barn, and occasionally turned.

This

New good seed is of a fine green colour, and smells like sweet hay; whereas that which has lost it's vegetative powers, is brown and scentless.

Quantity of Seed.—About four bushels per acre are sown broadcast; but if drilled, probably three bushels might be sufficient.

After-management.—On a strict attention to this department, in the early stages of it's growth, much of the future success of the plant depends. As it does not produce flowers in the summer following that in which it is sown, and requires some time to establish it's deep-running roots firmly in the ground, it will well repay the farmer's forbearance, not either to pasture or mow it until it is two years old. It should neither be eaten late in the autumn after the frosts commence, nor in the spring; nor should it at any time be depastured by horses, which would inevitably destroy a great number of the plants, by biting off the crowns whence the shoots proceed. It is found to be the most judicious practice, never to let any animal pasture upon it; the profit from the sithe alone is ample, when the nature of the ground which produces it is considered. In the autumn of the second year it should have a top-dressing of ashes, soot, or compost of lime and earth, and, if it was originally drilled, should then be hand-hoed: no vegetable or animal manure, however, should at any time be applied to it; as they invariably introduce the seeds of other plants, all of

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This may probably show, that the saintfoin-seed has usually been kept too dry in a granary, or some other similar place, whereby it's powers of vegetation were destroyed, while the stone-floor of the barn afforded a moisture that preserved it.—W. S.

of which are necessarily more or less inimical to it's growth.

Produce.—By the above treatment a great quantity of the most nutritious fodder may be obtained, frequently to the amount of two tons per acre, on the barest and most craggy knolls, and in the most favourable situations still more. This plant should be cut just when it is in full flower; unless it be intended to save the seed, in which case it must stand some time longer; and from the strong growth of it's stems, it is very easily converted into hay. It will continue thus productive, with little or no expense after the second year, except that of mowing and making the hay, for ten or twelve years, and even then, though it will gradually diminish in quantity, it may still be worth preserving for several more. A good crop, when allowed to stand for seed, will produce about two quarters per acre.

Application.—Saintfoin-hay is usually given to the farming horses; and they are found to work as well, and to be in as good condition, when fed with it alone, as with the best meadow hay, and the usual allowance of corn.

Red Clover.

This plant comes more properly under consideration among the crops, than it would in the second Section of the following Chapter, being in this district almost entirely cultivated as a crop for soiling or mowing for hay, after which it is ploughed up for wheat, scarcely any being allowed to stand (nor ought it, indeed, ever to stand) to a succeeding year, for being a biennial plant, very little of it will survive a second winter.

Seed and Management.—On the light lands it is usually sown with a crop of barley, after turneps; but on those which are stronger, where barley will not succeed, it is sown with oats.

Quantity of Seed.—From ten to fourteen pounds of seed are sown on an acre, according to the cleanness and fertility of the soil. When the crop is intended to be mown for hay, less seed should be sown than when it is designed for soiling or pasturing; and a small quantity of rye-grass may be added to it, as not only greatly increasing the crop, but also from it's being less leafy than the clover, not drawing it up or rendering it weak, and in case of it's having a tendency to fall, helping to support it[p].

Application.—When mown for soiling in the house or farm-yard, it is usually cut twice, and afterward pastured with sheep before it is ploughed up; but when it is made into hay, it is only mown once, (as the climate here will seldom dry a second crop,) after which it is pastured with sheep until the season for sowing wheat.

The hay is usually applied to the feeding of draught-horses and milch-cows, for which it is excellent food, being exceedingly nutritive.

Potatoes.

This valuable plant is very extensively cultivated as an article of commerce on the rich loams and warp-lands of Holderness and Howdenshire; a few are also grown in the sandy parts of the latter district; but they are held in lower estimation in the London market (where the greatest proportion of the surplus produce is consumed) than those which are grown upon the warp, as they turn black in drying after they are washed, whereas the latter preserve their whiteness. Potatoes are also cultivated, more or less, by every farmer and cottager throughout the Riding, for the consumption of their own families, and the supply of the internal markets, as well as in a small degree for feeding cattle and pigs.

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[p] For an account of the cultivation of red clover, see Middleton's Survey of Middlesex, p. 226.

A variety of contradictory opinions are held by agriculturists concerning the effect produced by potatoes on the soil, but it is here thought that they leave it in a more stiff, tenacious state than any other crop, and are therefore better calculated for light lands than strong ones, as they are liable to render the latter too adhesive; and from the quantity produced, it is apprehended that they also leave it less competent to the growth of wheat, than any other of the green crops, as it generally wears, when sown after potatoes, a pale and enfeebled appearance.

Sorts.—A variety of sorts are grown for these purposes, as "the Rednosed Kidney," "the Flat White," "the Purple Kidney," "the Cape Kidney," and other inferior kinds for family use; and "the Black Potatoe," "the Green Top," "the Oxnoble," and others of a large and coarse description for feeding pigs, &c.

The disease, called "the Curl," appears to be exclusively confined to the different varieties of kidney. It's cause is not here understood, and the only prevention of it, which has hitherto been discovered, is by procuring potatoes for sets, from peaty or moory land. These are perfectly safe the first year, and may even be planted in a second with tolerable security; but they must not be ventured any farther. For this purpose, the great potatoe-growers in Holderness and Howdenshire, some of whom produce from thirty to forty acres in a year, procure their potatoe-sets from the north of Scotland; but in the other districts, the sets are chiefly obtained from the Moors of the North-Riding[q].

Mode

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[q] In the eighth volume of the "Transactions of the Society for the Encouragement of Arts, Manufactures, and Commerce," is a triple statement of the nature of this disease, and the method of cure, by Messrs. Hollins, W. Pitt, and Holt, who divided the 30*l.* prize offered upon the occasion. These gentlemen seem to concur in recommending frequent change of seed, as it's only known preventative; in addition to which Mr. Hollins recommends, as of still greater consequence, *early planting*, "from the beginning of April to the middle of May." The Analytical Reviewers, however, sustained by some strong facts, reject the idea of degeneracy being induced by continued sowing of the same seed. IX. 3.

In the "Bath and West of England Society's Papers," are given a number of Letters upon the subject, establishing (perhaps more than any thing else) the truth of the old adage, *Quot homines, tot sententiæ*, as nearly every correspondent has his peculiar theory. Insects, the defective method of earthing the stems while in cultivation, worn-out ground, superficiality of setting, bad species of potatoe, the premature taking up of those intended for sets, the substitution of seed to roots, breaking off the sprits (or sprouts) from the sets, the effects of frost upon them during the winter, the bulk and richness of the potatoes selected for sets, &c. &c. are all, in their turns, criminated as causes of the disease in question; leaving, however, the three following *general propositions* fairly deducible upon the whole.

1. That the Old Red, the Golden Dun, and the Long Dun, are less susceptible of it than other species:

2. That it may be referred to one or more of the following causes:

Frost, either before or after the sets are planted.

Planting sets cut out of large unripe potatoes.

Planting

Mode of Cultivation.—When grown as a field-crop, they are always planted in a furrow made by the plough on the flat surface, at a distance of two feet between and one foot in the rows; and the sets are covered by the plough the next time about, four or five

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Planting too near the surface; and in old worn-out ground, or
Breaking off the first shoots of the sets before planting; and that, therefore,

3. The best modes of prevention appear to be,—"cutting the sets from smooth middle-sized potatoes that were fully ripe *before*, and had been kept dry *after* they were taken out of the ground; and without rubbing off their first shoots, planting them pretty deep in fresh earth, with a mixture of quick-lime, or on limestone land.

For some other opinions on the subject, see the selection from the above-mentioned Papers, printed in two volumes at Bath, 1802. Vol. II. pp. 402—406.

Communications upon it are likewise to be found in the Farmer's Magazine, Vol. III. February and August 1802, and Vol. IV. February and August 1803.

The inestimable importance of this root, in all it's applications, to the poor, has, at various times, induced the Board of Agriculture to take under consideration the best methods for promoting it's cultivation: "It was proposed at one of their meetings, (says the Secretary, in his perspicuous summary of the advantages which have resulted from the establishment of that Board, p. 31,) to offer a premium of 1000*l.* to the person who should make the greatest exertions in that branch."—Upon the second scarcity (in 1800) the Board received a requisition from the Committee of the House of Commons, to prepare and report a plan upon the subject, which was immediately obeyed. And to that, likewise, is owing the discovery of a cheap and easy method of preserving potatoes, from seasons of great plenty, to future periods of distress. This was effected by slicing and drying them upon a hop-oast or malt-kiln. "The expense (he adds) is trifling, and they may be kept for many years." The Navy-Board, to give the invention a fair and full trial, sent some barrels to Botany-Bay, which, on their return, were found exactly in the same state as when they were sent out; i. e. applicable to every domestic use, whether at home or at sea. These considerations will (it is trusted) justify this extended note upon a disease which five women being appointed to drop the sets after plough, so as to keep it constantly going. V planted on good rich warp-land, no manure is ı use of, but on less fertile soils a little long stable- is spread upon the sets after they are placed ir rows. About sixty pecks of potatoes, when cut sets of a moderate size, containing from two to eyes or buds each, are sufficient to plant an a ground at the above distances. The crop is ea up, when about four or five inches above the gr by the plough, and sometimes, though not gene a second earthing is given. In taking up, the process is adopted as in planting; from twen thirty pickers are employed for each plough, an length of the rows is measured and divided, that may have an equal proportion of the work. sound and saleable potatoes are separated fror small or wounded ones. This is either done b pickers, as they gather them up, or by passing after they have been spread and dried, through a wire or wooden riddle.

Produce.—From 300 to 450 bushels per acre, are sold by the tub of three bushels and a hal price varies in proportion to the value of the necessaries of life, and may be from four to te lings per tub.

Preservation.—This is generally effected by w

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which, though apparently regarded in the East-Riding as certa exclusively arising from the repetition of seed, and therefore mediable by the annual (or, at the farthest, biennal) change of *possibly*, under different circumstances, be produced by different and of course occasionally admit or demand different modes ment for it's alleviation at least, if not it's radical cure.—*F. Wı* here called "Pyeing." A dry elevated part of the field is chosen for the purpose, and after the surface is made firm and level, the potatoes are piled up in the form of a cone; they are then covered about six inches in thickness with dry straw; a ditch is then dug round the cone, and the earth which it contained is spread upon the straw and beaten firm and smooth with the back of the spade, forming with the straw a compact covering of a foot or more in thickness. This effectually preserves the potatoes from the severest frost[1].

SECT. V.—CROPS OCCASIONALLY CULTIVATED.

Flax.

A CONSIDERABLE quantity of flax is produced on the southern side of Howdenshire, and on the eastern bank of the Derwent, where the warp-land, or a rich loamy soil, prevails; but it is entirely local, as little or none is grown in any other part of the Riding, and the quantity even there rather diminishes than increases annually. As it requires a rich free-working soil, clear of weeds, it is usually grown on land which has been fresh broken up from old grass; this must be worked to as fine a tilth as possible, and about the first or second week in April, from two to two bushels and a half of seed are sown on an acre, (always broadcast,) and covered by light barrows. A good crop of flax may be worth from 12*l.* to 15*l.* per acre, as it stands, and produces about 50 stone of dressed flax, in the state ready for the heckler, at from eight to fourteen shillings per stone, according to it's quality. It has then, however, cost two shillings and sixpence per stone dressing, independently of the expense of pulling, watering, spreading on the grass, &c. These operations are generally performed by the grower, previously to disposing of the crop; but there are some who purchase the crops of flax growing, and after having dressed them, dispose of the produce to the hecklers.

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[1] For a farther account of the cultivation of potatoes, see Tuke's Survey of the North-Riding, p. 149, and Holt's Survey of Lancashire, p. 57.—H. S.

The Parliamentary bounty, in consequence of the smallness of the amount, (fourpence per stone on dressed flax,) and the tediousness of the forms required to obtain it, had very little effect, while it continued, in encouraging it's growth. It was discontinued about ten or eleven years since, prior to which time it was paid by the Clerk of the Peace, and by it's aggregate might have been useful in ascertaining the quantity annually produced*.

A manufactory is established at Howden for working up the first dressing-out, or refuse of the flax, which had previously been thrown away, into a very coarse kind of canvas for nail-bags and other such purposes.

Ruta Baga.

The Ruta Baga, or Swedish Turnep, was first introduced into Scotland from Sweden about the year 1787

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* The Surveyor applied to Mr. Lockwood, the Deputy Clerk of the Peace, both personally and through his partner Mr. Shepherd, for the amount of the bounty paid, but could not succeed in obtaining it.—H. S.

, whence it spread southward, and was brought
agricultural notice in this neighbourhood about
t or ten years since. At first, like other new dis-
ries, it made but little progress, but it's value
g now ascertained, it is coming into more general
vation. It is easy of culture, and it's value in
ıg, when the turneps are become hollow or rotten,
clover and tares are not ready for cutting, is in-
ulable; it appears, indeed, to be the grand link
ng sought for in the chain of provision through-
the year, for the inhabitants of the field and the
ı-yard. It is a plant likewise, upon the durability
hich the most perfect dependence may be placed;
when once produced, it is insensible, however
sed or injured, to the inclemencies of the weather;
is besides so entirely retentive of it's natural
es, that roots drawn in February, and carted to a
ı, have been found perfectly juicy, and in every
ect good in the beginning of June; it even
ains sound and moist after having ripened it's
l.

'ulture.—It is generally grown in drills, in the
ıner of turneps; but as it seldom attains to so large
ze, it will admit the rows to be somewhat nearer
ther than is usually practised in sowing turneps.
ıg slower likewise in it's growth than that plant,
ould be sown earlier: and if the seed is of a good
, and not contaminated by having been produced
ıe vicinity of any other of the *Brassica* genus, it
not shoot out it's flowering stem in the autumn,
ıgh sown as early as the middle of April; and even
should do so, the root will be little injured by it.
as, likewise, this great advantage over the common
ıep, that all vacancies may be filled up with the
greatest

greatest facility by transplanting, which it bears with as much certainty as any of the cabbage-tribe; and patches, which are too thick, will always supply plants for the purpose. Some persons, indeed, recommend and practice the transplanting of the whole crop, from a seed-bed in the garden to the field, which affords more time for preparing the land, but being attended with additional expense, this plan has not been generally adopted.

Application.—This plant is usually applied in the late spring-months to the fattening of cattle and sheep, which improve upon it very rapidly; but from the firmness and solidity of it's texture it requires cutting very small, particularly for sheep, as without this precaution their teeth are apt to be loosened by it. For this purpose several machines have been invented, some of which are very efficient and expeditious. See pl. I. fig. 2 and fig. 3.

Cabbages.

Several varieties of the cabbage are cultivated as food for cattle and sheep in this district. Mr. Ombler, of Saltagh Grange, in Holderness, in particular, a great breeder of rams of the Lincolnshire kind, and an eminent agriculturist, has cultivated them to a considerable extent for many years past, and has found his sheep improve as well at least upon them as upon any other food. His mode of cultivation is as follows about the middle of August he sows in seed-beds the seeds of the Sugar-loaf, the early Dutch, and th Drum-head cabbages, of which the hardiness and readiness for use are characterised by the order he stated. In the course of the autumn they are thinne

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and those which are drawn out are transplanted into other beds to stand the winter. In the beginning of the following April the seed-bed plants are transplanted into the field, and in about three weeks afterward those, which have been somewhat retarded by transplanting in the autumn, form a good succession. It is to be observed, that the cabbages hitherto spoken of are designed for the earliest consumption, and should be eaten off by the end of December, as the autumn-sown plants are less able to stand the severities of winter than those which have been sown in the spring. When it is intended to have cabbages for use in the spring months, the seeds of the Drum-head cabbage and the Purple Borecole, or Scotch-Kail, should be sown about the beginning of March, and the plants transferred from the seed-bed to the field in the middle of June following: one pound of seed sown on a seed-bed of fine rich earth, of about ten perches, will produce plants sufficient for three acres. By the above means, a constant succession of cabbage-food may be secured, in a fit state for use, from the middle of September to the middle of May; and by introducing the early-cabbage into the course, might be extended throughout the whole year. But the different periods of sowing and transplanting require to be attended to with considerable exactness, as highly essential to the goodness and the duration of the crop.

Method of Planting.—The usual mode of planting this crop is by ridging up the land into two-bout ridges. The manure is then put into the furrows, and the ridges are split upon it, so as to form ridges where the furrows previously were. The cabbages are then planted on the top of each ridge. This method may succeed very well on moist retentive soils; but, upon those which have any tendency to dryness, the plants must perish, as the land, being raised up and kept open by the manure, is much drier than when laid level: It is therefore a better practice, upon dry soils, after the land is ridged up, and the manure placed in the furrows, to cover the manure by drawing across the ridges the back of the harrows, and then plant the cabbages upon the manure, which will lie rather in a hollow, the remainder of the ridge serving to earth up the plants, as they advance in strength. The planting must be performed with a dibble, which should be as long as the intended distance of the plants in the rows, in order to make it useful as a measure. A careful man must be employed to plant, as much depends on the earth being pressed firm about the roots, women or children dropping the plants at regular distances before him. A rich and rather strong loam is best suited to this class of vegetables, but they may be cultivated with success upon soils of lighter quality. The land should be ploughed in the autumn, and worked well in the spring, as for turneps.

Application.—The fattening of cattle and sheep, either in the stall or the field. A good crop of cabbages will weigh from twenty-five to thirty tons per acre. This, with a little hay, has been found by accurate experiments, fully sufficient for making up three oxen of 75 stone each, which have got into forward condition on the summer's grass; and is considered by those who have cultivated it, as much superior by the acre to turneps for stall-feeding. It is also extremely valuable for ewes at the time of lambing, and for milch-cows; as it produces a great supply of milk, and

if the yellow and decayed leaves are taken off,
out imparting to it, or to the butter produced
it, any disagreeable flavour. Three acres, with
have kept twenty cows upward of four months;
even when given with straw, cause them to milk
thrive better, than the best hay when given
e.

he Turnep-Cabbage, or *Kohl-Rabi*, and the *Chou*
ille Têtes, have been tried by some cultivators;
though they have each their good qualities, they
ot appear, by any means, so generally useful as
e above described.

Buckwheat, or Brank.

his plant, the *Polygonum Fagopyrum* of Botanists,
first cultivated upon an enlarged scale in this
rict by Sir Henry Vavasour, Bart. about twelve
rs ago, and still continues to be extensively culti-
d in his parish and neighbourhood, from fifty to a
dred acres being annually sown with it. It is
uliarly adapted to light sandy or moory soils, not
rcharged with water, upon which it rarely fails to
duce an abundant crop, even though the land
uld not be in the best condition.

ultivation.—When it is intended to intervene in a
rse, it succeeds a crop of oats, the stubble of which
loughed in the winter, and the land is thoroughly
d and cleansed in the spring. But when grass-
ds are intended to be sown with it, it is usually
ceded by a crop of turneps. If the land is foul, it
ery serviceable to take a crop of buckwheat the
r before the turneps, as by this means it gets two
ing-fallows, and the land may be effectually
ansed without the loss of a crop.

whole, it is a most useful plant in situations adapted to it, and is deserving of extended cultivation[t].

Lucern,

In this district, has only been tried upon a small scale by a few intelligent Gentlemen, who have always the advantage of their tenantry, and the improvement of agriculture in view, and who are ever ready to try any experiment, which bears a reasonable prospect of accomplishing either of these important objects. So little has yet been grown, that no account can be given of the cultivation or produce; but it appears to be a plant well worth the attention of farmers, as it produces a very great quantity of green food; and remains for a considerable number of years in the ground.

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[t] For a farther account of the cultivation of buckwheat, see Farmer's Magazine, Vol. IV. p. 409.

CHAP.

CHAPTER VIII.

GRASS LANDS.

SECT. I.—NATURAL MEADOWS AND PASTURES.

OF the ancient natural grass-land, formerly so abundant in the East-Riding, little has of late escaped the operation of the plough. The marshy meadows adjoining to the Derwent, a few grazing pastures in Holderness and Howdenshire, and the small garths or paddocks in the immediate vicinity of the towns and villages, form the principal part of what now remains. The old sheep-walks or pastures, formerly the ornament of the Wolds, have generally disappeared; having all, with the exception of two or three, undergone the exhaustion of repeated crops of corn and rape-seed, more to the profit of the occupier probably than to that of the owner[u]. The marshes adjoining to the Derwent produce annually an abundant crop of coarse flaggy hay: that, however, which is grown above Malton, though abundant in quantity, is of a very indifferent quality, being little superior to straw in nutriment, as the waters of the Derwent are there almost wholly supplied from the peaty moors, and consequently leave no sediment to enrich the land but after that river has been joined by the Rye, whic flows for many miles through a rich and well-cultivate country, it's waters become loaded with fatteni particles; these, added to what it receives in passi Malton, and throughout it's subsequent course, fer lize the meadows with their valuable deposit. Cottingwith is a tract of marsh-meadows lying by t side of the Derwent, and occasionally overflowed by which annually produce a vast burthen of coarse bro leaved hay, similar in appearance to that which gr in the marshes above Malton, but of far superior q lity. It is said, indeed, to be so nutritive, as to alone capable of making fat the animals which fee upon it, and of so sweet a taste that the pigs will pu and eat it from the ricks. In Holderness are a fe very fine old grazing pastures, but as that district under a pretty general system of not keeping land fo any considerable length of time in grass, the greate part of them have been taken out and laid down in their course. In a country naturally so fertile, and having a strong soil, this mode of cultivation is found highly advantageous to the occupier, without being injurious to the owner; very valuable crops are thus obtained for a few years, and the land is again returned to pasturage uninjured, or perhaps improved by the cultivation.

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[u] The sheep-walks and pastures upon the Wolds are marked with numerous verdant circles, here called "Fairy-rings," from twenty to fifty feet in diameter, but seldom quite complete, and about half a yard in breadth; and from the circumstance of mushrooms and other fungi growing abundantly upon them, they appear to be much richer than the adjoining soil; they have been attributed to lightning, but whether on good authority has not been hitherto ascertained.—H. S.

The salt-marshes on the outside of the embankments in the neighbourhood of Sunk Island, there called "Outgrowths," are a very peculiar species of natural pasture, though of no great extent, as the land is seldom allowed to remain long unembanked after it is high enough to be inclosed. As soon as it becomes, by the aggregation of mud, sufficiently elevated to be constantly above water for a few days at neap tides, it is immediately taken possession of by the *Poa Maritima*, which, in a short time, completely covers it with a close short sward, and is the only plant, except samphire, *(Salicornia herbacea,)* which grows upon it so long as it is subject to be overflowed by the salt-water. By this time it has acquired sufficient firmness and solidity to bear the treading of sheep, which are suffered to stray over it from the adjoining grounds; and after they have recovered from the purging which the salt at first produces, they thrive extremely well upon it, particularly if a shower of rain fall soon after the recess of the spring-tides, to wash the mud off the grass. Other kinds of live stock seldom come upon these strays, as the pasturage is not sufficiently abundant to induce them to leave the cultivated fields; and the ground being in many places dirty and muddy, and intersected by deep channels made by the reflux of the water, they not only would not thrive upon it, but might be liable to various accidents. These "outgrowths" are not considered as of any great value to the occupiers, farther than as they afford an occasional relief to the cultivated pastures which receive the sheep for a week or ten days during spring-tides: sometimes, indeed, a strong easterly wind during the neap-tides will occasion the water to dirty the grass, so that it cannot be fed upon.

SECT. II.—ARTIFICIAL GRASSES.

In the choice of seeds for laying down arable lands to the state of grass, many circumstances require attention. It is necessary to consider first, the nature of the soil and situation meant to be laid down; in the second place, for what purpose the land is subsequently intended; and thirdly, how long it is to remain in grass before it is again applied to tillage. After these preliminary considerations, we must examine, which of the most approved grasses grow spontaneously in similar situations. On the Wolds, where a permanent sheep-pasture is required, plants affecting a calcareous soil, and such as are low and spreading in their growth, should be selected: viz. the crested dogstail *(Cynosurus cristatus)*, sheeps-fescue *(Festuca ovina)*, dwarf rye-grass, a low growing variety of *Lolium perenne*, yarrow *(Achillea millefolium)*, burnet *(Poterium sanguisorba)*, annual meadow-grass *(Poa annua)*, white clover *(Trifolium repens)*, trefoil *(Medicago lupulina)*, and cow-grass *(Trifolium medium)*. A mixture of these grasses would afford a constant supply of food throughout the summer, from the earliest to the latest efforts of vegetation. On strong, rich, and moist situations intended for meadow-grounds, the meadow foxtail *(Alopecurus pratensis)*, meadow-fescue *(Festuca pratensis)*, great meadow-grass *(Poa pratensis)*, cocksfoot *(Dactylis glomerata)*, timothy-grass *(Phleum pratense)*, and cow-grass; and when the like situations are designed for pasture, yarrow, white clover, rye-grass, and rib-grass *(Plan-*

taga

tago lanceolata) may be added to the above. And on sandy or peaty soils, yarrow, annual poa, rib-grass, trefoil, sweet vernal *(Anthoxanthum odoratum)*, white clover, rye-grass, crested dog's-tail, and cocksfoot. On any soil, if the grass be intended to remain for two or three years only, and then to be ploughed up again, white clover, trefoil, and dwarf rye-grass should be used; and if on a strong loam, a little red clover *(Trifolium pratense)* may be added; but if it be only for one year, red clover, with a small portion of rye-grass, must alone be made use of.

The usual method of sowing grass-seeds, as practised here, is with a crop of corn in the spring, generally barley or oats; one or two instances have occurred of sowing them with beans, which seem to promise well, and the practice would be excellent, if proper attention were paid to make the land perfectly clean previously to the beans being put in. The beans ought, likewise, to be drilled, and the grass-seeds sown when the intervals are horse-hoed, which was not the case in the instances alluded to. But the best cultivators either sow their grass-seeds in the spring with about a quarter of a peck of rape-seed, or a bushel of spring-tares per acre instead of corn, in which case both are eaten off by sheep early in the following autumn; or they are sown after a bare fallow without any other crop, just before the beginning of harvest: and when the field is intended for permanent grass, either of those last-mentioned methods will be found to repay amply the loss of the grain-crop. A very able and intelligent agriculturist in Holderness has sown down a field with grass-seeds for a permanent sheep-pasture in the following proportions per acre, viz,

White

	lbs.
White clover	15
Red clover	1
Rib-grass	2½
Trefoil	4
Cow-grass	3
Caraway	2
Dwarf parsley	1
	28½

Rye-grass ½ peck.

The pasture was an excellent one, and the sheep upon it looked remarkably well. The caraway and parsley were sown with the intention of preserving the health of the sheep, and appeared to be eaten down by them with the other grasses. No particular proportion of grass-seeds can be generally given, as it varies in each particular instance, according to the opinion of the cultivator, or the nature of the situation. In one instance, white clover was sown, without any intermixture, on a piece of good land, and kept eleven sheep per acre during the first summer. But the most general quantities sown are from eighteen to twenty-four pounds of the different species of clover, trefoil, and rib-grass, and half a peck of rye-grass per acre.

SECT. III.—HAY HARVEST.

The hay harvest commences here in the clover and saintfoin-fields in the second or third week of June; but in the old meadow-lands, owing to their being seldom cleared of live-stock until the middle of May, this operation rarely commences before the last week of July, when rainy weather almost invariably occurs. An expert mower will cut of saintfoin two acres or two and a quarter per day, of clover a little less; and as the weather is at that season usually fine, and the saintfoin is naturally dry and open, the making of it into hay is attended with little difficulty: the clover being more succulent, requires greater care, and more time to dissipate the juices, as it is otherwise very subject to heat in the stack, and become mouldy. The best method of making clover into hay is found to be, by repeatedly pulling it over in the swathes with the teeth of the rake, until it is sufficiently dry to put up into small cocks, in which it may remain two or three days secure from danger; then advantage being taken of a brisk drying day, they are spread out two or three together, turned once on the ground, and put up into large cocks of about half a ton each in the evening, in which state they remain until removed to the stack. This method is much preferable to spreading it about, as it is a delicate plant, and easily loses it's leaves, either by being shaken about, or by being much exposed to moisture. Much greater inattention and mismanagement appears in the mode of making the meadow-land hay, as practised here. The labourers generally mow about an acre in a day, and that in a very slovenly imperfect manner; cutting the grass quite down to the ground in the middle of their breadth, and leaving it often three or four inches long, or more, at each side: hence, when it is raked off, the field appears from those ridges in a very unsightly, as well as unprofitable state. It is then often suffered to remain two or three days in the swathe undisturbed, till it's upper side is dried and bleached by the sun and dews, and it's underside is turned yellow by the commencement of fermentation. But by a still worse practice, the hay is frequently, and particularly in uncertain weather, got up hastily into large cocks before it is sufficiently dried; and in that condition being deemed safe, is allowed to remain until the bottom is black and rotten, the middle mouldy, and the top bleached with the rains, while the grass upon which it stands is quite destroyed for that season. As a general principle, grass cannot be spread too soon after the sithe, nor can it afterward be too soon cleared off the ground into cocks, of a size proportioned to it's state of dryness; and then ought to be repeatedly spread out and made up again till the hay is completely dry, being enlarged each time they are spread out.

SECT. IV.—FEEDING OFF, AND MANAGEMENT OF PASTURE AND MEADOW LANDS.

THE fatting pastures are usually freed from all kinds of live stock, from the 6th of April to the 13th of May, in the course of which time the dung dropped in the preceding year is broken up and spread about, and the fences examined and repaired. The cattle, which have during that time been kept in the lands intended for meadow, or in the straw-yard, are then turned in, allowing from one and a half to two acres and a half for each beast, according to the fertility of the soil, and the size of the animal; and if the pasture be very good, a few young colts, or a light stocking of sheep, are added, but this is not very frequently done. Surface and under-draining are sometimes applied to the grass-lands where necessary, and if weeds make their appearance, or too luxuriant a vegetation takes place, the sithe is used once or twice during the summer, which is generally an effectual remedy.

The meadow-lands are commonly eaten down quite bare in the spring to save the fatting pastures, and are rarely completely cleared from live-stock before the middle of May; the consequence of which is, that the grass is seldom ready for cutting before the end of July, when the hay is frequently materially injured by the wet weather which usually occurs at this season. When the cattle are removed, their dung is broken and spread, and the inequalities of the surface are levelled by the "ground-sledge," see pl. III. fig. 3; the fences are repaired, and all sticks, stones, and other obstacles to the sithe, are gathered and carried off. The application of manure to meadow-land is very rarely practised, although, without doubt, manure cannot be more usefully or more profitably employed. The lands, however, commonly used for meadow are occasionally, though too seldom, summer-pastured.

The after-grass, or "fogg," as it is here called, is never mown for a second crop of hay, as the climate will not admit of it, but is pastured with fatting cattle or milch-cows; and if the owners have no occasion for it, they let it out to butchers or graziers, at from fifteen to twenty-five shillings per acre; and sometimes, when it is very good, they take in cattle at from five to seven shillings per head per week.

CHAPTER IX.

GARDENS AND ORCHARDS.

IN this County, gardens and orchards are not made objects of emolument, and, except among the higher orders, scarcely that of pleasure or comfort: the farmers, in general, unacquainted with the advantages which they might derive from them, apprehend that they would engage too great a portion of their attention; and rarely making use of any other vegetables than potatoes and turneps, which are more cheaply produced by the plough than the spade, think little of their garden.

Most of the labouring class, however, have small gardens attached to their cottages, which are cultivated with tolerable care; and many have a few fruit-trees for the supply of their families, but little of their produce goes to market, and cyder has probably never been attempted in these districts.

CHAPTER X.

WOODLANDS.

THIS subject naturally divides itself into two heads, viz. ANCIENT WOODLANDS, which have been in that state from time immemorial; and PLANTATIONS, or such woods as have been formed within the memory of man.

The ancient Woodlands of the East-Riding are by no means proportionate to the area of the country, and are almost entirely confined to the Hundred of Ouse and Derwent. Here Mr. Thompson, of Escricke, has some very valuable woods of full-grown oaks; in addition to which his hedge-row timber is probably of equal value, and both together may be more valuable than the remaining full-grown timber of the East-Riding. In this district also are several other extensive woods, as Seaton Wood, Grimthorpe Wood, Scoreby Woods, of about 200 acres, Kexby Woods, about 100 acres; those in the lower part of the Hundred, and on the property of the Earl of Egremont, with some other smaller woods, consisting chiefly of oak and ash, but seldom of large dimensions.

In that part of the Hundred of Buckrose, which lies on the western foot of the Wolds, is Settrington Wood, belonging to Lady Masterman Sykes, of about 60 acres, consisting chiefly of well-grown and thriving ash, with some good oak; and Housham and Firby

Woods, jointly about 200 acres in extent: but these timber, though thriving, is young; those woods having been cut down of late years.

Holderness, or the clay-land district, never contained any woods except those of Rise and Burton-Constable, and very little hedge-row timber, and that of inconsiderable value. Rise Wood (belonging to Mrs. Bethel, widow of the late W. Bethel, Esq.) originally comprised 200 acres; but some years ago about 40 acres were cleared and taken into the park. This wood consists of well-grown oak and ash, the last, however, of inferior quality, as the soil is unsuitable to that tree.

At Burton-Constable, the late Edward Constable, Esq. entirely cut down an ancient wood of oak, called "Norwood," containing about 100 acres, and the ground has since been cultivated; nothing now remains there except "Yaud Wood," of 25 acres of oak and ash, and the ornamental trees of the park.

Near Beverley stood, some years ago, an extensive range of thriving oak-wood, though not of large size, called "The West-Woods." These were held under the See of Durham, and regular falls were taken by the lessees, or the Bishop, at stated periods, by which means a perpetual succession was preserved; and while the timber and underwood remained in an uniform state, a regular income arose from them to the See. But these woods were, *by some means or other*, taken down a few years since, though not without having become an object of legal investigation; but whatever might have been the decision of the law, *the law could not make the woods grow again, or the land revert to wood; consequently it is now cultivated, and some one has thus obtained the whole capital value of the wood,* *who had only a right to the annual income arising from it, and with it has obtained the annual income of the land into the bargain.*

On the Wolds no timber probably ever grew, because in such an extensive tract of country, had woods ever existed, some traces of them would still have been discoverable. There is reason however to suppose, that anciently great part of this country was covered with strong thickets and coverts of thorns, whins, (gorse,) hazels, and briars, because many such remained in late years, but always unaccompanied by trees.

Little more can be said of the natural woods of the East-Riding. What woods remain unnoticed are of small extent, and little value. Care in the management of those particularly mentioned, seems to have been little exerted; they were left to time and chance; and if they were tolerably fenced from cattle, that was all the pains bestowed upon them. Thus the Navy of Great Britain has little support to expect from this Riding.

It's plantations, however, will make a better figure than it's ancient Woodlands.

Upon the Wolds, very extensive plantations have been made; the first, that are worthy of notice, were begun by the late Robert Grimston, Esq. at Neswick, and the late Sir George Strickland, at Boynton, about forty years ago; but the late Sir Christopher Sykes undertook the business soon afterward upon a much more extensive scale; and others, encouraged by their success, and the increasing demand and value of timber, continue to plant, and some even with the sole object of profit; for that it is very profitable, will be hereafter proved.

The principal plantations in this district are those planted by

	Acres.
The late Sir Christopher Sykes, and Sir Mark M. Sykes, about - -	2000
The late Sir George Strickland, and Sir William Strickland, - -	380
Mr. Denison, Kilnwick Piercy, - -	200
Mr. Grimston, Neswick, - -	150
Mr. Tindall, Knapton, - -	120
Mr. Williamson, Welton, -	400

The soil, upon which the above are planted, is uniformly a calcareous loam on chalk, in many places approaching within a few inches of the surface. They have been executed on different principles, and in various modes; some having been planted with trees raised by the proprietors, some by contract, some at a yard square, or at the rate of about 5000 to the acre, with very small trees from one year to three years of age; some with larger trees, and at different distances down to two yards square, or about 1200 to the acre. Some, again, have been planted chiefly with Scotch fir; others with mixtures of various trees in different proportions, according to the convenience or judgment of the owners. In general, however, it may be pronounced, that those plantations have succeeded the best, which have been executed by the proprietor with trees raised by himself, and at less expense also than by contract; because trees taken from the neighbouring nursery as they are wanted, are immediately planted, and suffer little by the short time they are out of the ground, and the sorts and proportions of each are thus more accurately preserved.

The smallest trees universally succeed best in the dry parts of the country; much fewer die than of the larger, which they soon overtake, though planted along with them: and it will appear below, how much more profitable it is to plant the greater than the smaller number per acre.

On the Wolds, the Scotch fir shoots vigorously for a few years. After the growth of about twenty years, however, many die without any apparent cause, and none appear likely to produce valuable timber; these and the spruce-fir thrive the worst of any trees, though probably not worse here than on other chalk soils. The larch promises well; and the beech and the ash, natives of a calcareous soil, fully answer the expectations of the planter: of the last, trees may be met with in several places of extraordinary dimensions; yet a beech arriving at maturity is scarcely to be found, it not being indigenous. Oaks may probably grow to useful, though not to large dimensions.

A mixture of trees is always to be recommended in planting, unless the soil be obviously applicable to some particular species; because if five different sorts of trees are planted, and five times the number which can be left to become timber, then that species which is most thriving and most suitable to the soil will be suffered to stand, when the others are taken away; and thus a wood will at last remain of those trees, to which the soil proves most congenial, but which, from want of experience, might probably not have been selected at the time of planting.

This is one of the advantages of thick over thin planting; one reason why five thousand trees to the acre are so much more beneficial than 1200: but it is also far more advantageous in point of immediate profit. Suppose 5000 larch trees planted upon one acre, and 1200 upon another, the profits will stand thus:

One thousand trees cut down at ten years' growth, will produce each a fencing rail nine feet long, worth sixpence each, or in the aggregate 25*l.*—One thousand cut down at seventeen years' growth, will produce three thousand rails worth 75*l.*—One thousand cut down at twenty-three years' growth, will produce seven thousand rails worth 175*l.*—At this period we will allow eight hundred trees to have been destroyed by casualties, the number on the acre will then be reduced to 1200, the number with which the other began.

	£.	*s.*	*d.*
Then 1000 produced, - -	25	0	0
Interest of ditto, for 13 years,	16	5	0
1000 produced, - -	75	0	0
Interest of ditto, for 6 years,	22	10	0
1000 produced, - -	175	0	0
	313	15	0

From this sum the only deduction to be made is the difference of expense occasioned by planting the greater number of trees: allow for this 4*l.* and interest upon it for 23 years 4*l.* 12*s.* together 8*l.* 12*s.*; and the net profit is 304*l.* 13*s.* or per acre per ann. 13*l.* 5*s.* But as the acre planted with 1200 trees must be liable to proportionate casualties with the other acre, it will have lost about 200 trees at this period, while the other will remain 1200 complete; and as it might be thinned at about 30 or 35 years growth to the number of 800, at which time the wood will have become valuable as timber, 200 trees only will remain for cutting upon the thinly planted acre, while upon the other there will be 400; so that here again will accrue a double profit, and probably considerably more; because upon one acre selected trees will always have been left, while upon the other they must be the whole which have survived, and consequently many of them bad ones.

Other expenses, as fencing, rent, taxes, &c. have not been included in the above calculation, because they will be alike on both acres, and variable according to circumstances. They will make a considerable deduction, however, from the total of both; and therefore it must not be looked upon as net profit, although many plantations will give a much greater return than is above stated, and have a more rapid growth.

But, as a mixture of deciduous trees will be preferred by most, were they to plant 3000 larch, and 2000 of oak, ash, beech, sycamore, &c. to the acre, the latter would be nursed and trained up by the larch, and would gain space for growth as the larch were thinned out. This would probably be found the most profitable mode of planting in this district, as well as most conducive to the growth of the wood.

The plan adopted by Sir Mark M. Sykes, and his father Sir Christopher Sykes, for forming the very extensive woods at Sledmere and the neighbourhood, (nearly 2000 acres,) has been to contract with a nurseryman to supply the trees, and plant them, and make good the deficiencies, so as to leave about 5000 trees growing on an acre at the expiration of three years, at the rate of from four to five pounds per acre; but from the great advance which has taken place in the price of labour, the rent of nursery-ground, and other contingencies, the nursery-men now demand from 6*l.*

to

to 6*l.* 10*s.* per acre, according to the nature of the soil, and the sorts and sizes of the trees to be planted.

In an account drawn up for the Board of Agriculture by the late Sir Christopher Sykes, Bart. of the expense, value, &c. of his plantations, dated February, 1803, are the following remarks:

" The land I have planted in the East-Riding of " Yorkshire is chiefly a thin soil, upon a hard, chalky " limestone-rock, worth from five to ten shillings per. " acre. It is fenced with a ditch four feet six inches " wide with oak-posts, and three sawn straight rails. " Battins make the best, riven oak or ash rails never " are a secure fence against sheep; tempted by the " uncropped herbage within, they will seek for small " bends in the rails to creep through. This fence, " before I had the thinnings of my own plantations, " cost about 6*s.* per rood of seven yards.

" My method of planting is in small holes made in " the turf; if I plant in the trenched or ploughed land, " the plants die: my thin soil just produces grass " sufficient to keep out the sun in summer, and the " frost from the roots in winter. The holes are made " in the autumn at three feet asunder, and eight or ten " inches over, returning the soil into the hole at the " time of making it with the turf downwards; and in " the first open weather after Christmas, we plant with " a large dibble one year old transplanted larch and " other trees. The holeing costs here 12*s.* 1*d.* per acre, " and the planting 10*s.* 10*d.*

" Being lately asked my idea of the value of plantations of twenty years' growth, I took some pains to " ascertain the different values of larch and Scotch fir " plantations, by selecting patches of each in my " young woods, and valuing each plant for the making

" of rails; and I find that on land, which previous to " it's being planted was let for 3*s.* per acre, the larch " at 19 years' growth will make 4,200 nine-feet rails " upon an acre, which at 3½*d.* per rail, will be 61*l.* per " acre; and on other land worth 20*s.* per acre, the " larch at 21 years' growth make 12,000 nine-feet " rails, which, at the above value, is worth 175*l.* per " acre[*].

" Where the land is planted solely with Scotch firs, " the plantations are less valuable, considerably dimi- " nishing in quantity as well as value of the wood; at " 22 years' growth it will not average more than 35*l.* " per acre on land worth 12*s.* per acre to rent. The " quantity of rails thereon will not exceed 5,600, " which I value at 1½*d.* each. These values of the " rails are, exclusive of the expenses of felling, sawing, " and pointing the ends; the larch should therefore " be sold at 5*d.* and the Scotch fir at 3*d.* each.

" I always belt round my plantations with Scotch " fir, and intermix them throughout; but I never made " a plantation solely of the Pinus tribe, as I conceive " them to be too temporary; and the larch, I think, is " too little known to depend entirely upon in untried " places, for arriving at size for timber. I would use

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[*] It has not unfrequently been asserted, that *the better the land employed for planting, the greater will be the profit;* but the reverse is here strongly exemplified. On land let for 3*s.* per acre per ann. worth at 30 years' purchase 4*l.* 10*s.* per acre, the trees at 19 years' growth are worth 61*l.* per acre, or about 13½ times the fee-simple value of the land; whereas on land worth 20*s.* per acre to rent, and at 30 years' purchase worth 30*l.* per acre, the trees are worth 175*l.* per acre, or less than six times the fee-simple value, although they had two years more growth than the others.—H. S.

" it as a nurse to train up the oak, ash, beech, or elm ; " and as soon as the larch are the size for making rails, " they should be thinned every year, till they are all " taken out in about 25 or 30 years, which, if there " is any sale for them, will fully repay all the expenses " of the plantation, and leave a valuable young wood " to succeed. Trees of the Pinus tribe are quick " growers, overshadowing and crowding their more " tardy growing neighbours; and planted alternately " with other species, want mutual support themselves, " and too severely lash their neighbours. To prevent " these inconveniences, instead of planting the different species of forest-trees individually alternate, I " plant each species in alternate groups of from twenty " to thirty in each group: these occupy the space of " one or two full-grown trees, and are not so large as " to give the plantation a patchy appearance during " it's growth."

To the above account it is here proper to add, that this extensive undertaking, which does so much credit to the judgment of Sir C. Sykes in the plan, and to his attention and skill in the execution, is greatly improved since the date of this account, is in all parts in a thriving state, and under the care which is taken of it by the present Sir M. M. Sykes, is rapidly growing into prodigious value.

When planting was first attempted in this part of the kingdom, it was usual to plant the trees in rows; but that method was soon given up, as it was found that the trees did not afford mutual shelter; and when grown up, that the plantation always looked thin and open at the bottom, when seen at the ends of the lines. They are now always planted at random, and usually at about the distance of a yard from each other.

An experiment has been made here on a small scale, and with great apparent success, with the view of reducing the expense of planting in bare and barren tracts, which are not subject to produce a quantity of long grass or other plants which might smother the trees. Instead of digging a hole, and inverting the soil into it sometime previous to planting, the method is merely to strike the spade into the ground and move it sideways, so as to open the ground, at the time of planting, to receive the roots of the plant, which must be carefully spread in the opening, and the earth trod firmly down again with the foot. The plants hitherto employed in this manner have been one year's transplanted trees; but it is thought, that strong seedlings will succeed where they are not liable to be overgrown, which will reduce the expense to the lowest point.

Many screen-plantations have been made on the Wolds, but almost always on too contracted a scale; and as they are not made of sufficient width for the trees to afford shelter to each other, they are with much difficulty raised: the winds tear them to pieces, and the snows drifting amongst them, to the thickness of several yards, break them down, more particularly when from ten to fifteen years growth. The outsides of such screens facing the North and East must always be expected to perish; but when such plantations are not more than twenty or thirty yards in width, as is frequently the case, the whole is destroyed, or in a few years nothing more is left than a few stunted and crooked stragglers.

In the more favourable situations in this district, the silver-fir, though not frequently planted, appears to thrive much better, and to grow much quicker and cleaner than any other fir, and the wood also is at least as good. There is reason likewise to believe, that it would grow full as well as any of them, even in exposed parts of the country: but the tree, which seems most likely to supersede the use of the fir-timber of the Baltic, is the larch, which from it's straight and clean growth, is applicable to every similar purpose with the other where strength and clean timber is required; and it is not too much to say, that in durability and beauty of timber it surpasses it. The larch is an exotic, first introduced into this island about a century ago, but no particular account of it's introduction is any where given. The largest, of which there is any account, are said to be in several parts of Perthshire, whither they were carried by one of the Dukes of Athol about an hundred years since, and some of them, it is stated, girth as much as fifteen feet. As some, however, of the oldest and largest perhaps in England, are in this district, it might be right to insert a brief account of them, as tending to give the history of the introduction into the southern part of the island, of this most valuable tree.

About the year 1725[y], Sir William Strickland of Boynton, received some larch-trees from Switzerland, in number probably about an hundred. These were planted in small detached clumps, (in a situation then very exposed, without any protection from surrounding trees,) in good, but very dry ground, with chalk very near the surface. Of these thirty-one are now remaining, all in perfect health, and will appear from the following measurements to be still in their full growth.

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[y] The exact year I cannot now ascertain, but know it to have been about 1725. I have frequently seen the receipt for the freight of them from Marseilles to London, and it was in being not many years ago; but it cannot now be found.—W. S.

	1799		1804		1809		
	Ft.	In.	Ft.	In.	Ft.	In.	
1 measured in			5	4½	5	8½	The girth taken at three feet from the ground.
2			5	5	5	8½	
3			5	1	5	5	
4	6	4	6	10½	7	4	
5			6	8	7	0	
6			5	3	5	6½	
			34	8	36	8½	

Whence it is to be observed, that these six trees have gained two feet in girth in five years, or about four inches each; and thus, supposing they carry timber only for thirty-five feet in length, they will have gained 55 cubic feet of timber in that time, i. e, about nine feet each, or upward of one foot and three-fourths each yearly, which being so much more than their average yearly acquisition from the first, is a proof of their being in full health and in their most rapid state of growth. They are now about 75 feet in height, and appear to be gaining eight or nine inches in height annually; the trees not measured are equally healthy with the above, but of smaller dimensions.

These trees are supposed to be the parent-stock of most of the larch-trees in the North of England; the nursery-gardeners, about the middle of the last century, having got the cones from them before they were able to procure a supply elsewhere: and between forty and fifty years ago, a quantity of cones were annually sent for several successive years to the late Sir George Savile, then making his great plantations at Rufford, in Nottinghamshire, (a distance of nearly

150 miles from Boynton,) a sufficient proof of their general scarcity at that time[1].

Many thousands of the red larch *(Larix rubra)*, a native of the northern parts of America, have been planted at Boynton of late years, the produce of a single tree planted there about thirty-five years ago: what peculiar merit they may have, is yet to be ascertained, but they thrive as well as the Alpine larch, and are as easily propagated. This tree has it's branches more slender and drooping than the common larch, the young shoots are of a reddish tinge, the bark of the bole is smoother and less divided by cracks, and the cones are smaller, loose, and easily shed the seed, while in the common larch the seeds are with difficulty separated from the husk. Here, also, a considerable number of the Norway maple, *(Acer Platanoïdes,)* the most beautiful of it's genus, have been propagated with success, as the soil appears favourable to them, and they multiply spontaneously from seed. Many other curious exotic forest-trees and shrubs may, also, be found at this place.

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[1] The value of larch is gradually becoming more known, not only as a nurse to other trees, but to continue for timber. In most situations they are more rapid in their growth than any other trees, except the aquatic kinds. Whenever Scotch firs are introduced into plantations, I have always found it the best method to treat them only as nurses, and to take them all out in the first or second thinnings, for by growing with such large thick tops they greatly injure their neighbours; and I think it best to divide them as much as possible, rather than plant them in groups, for the reason, that when the whole of a group is felled there is no succession. The proportions which I have adopted have been three-fifths larches, one-fifth oak or larch, as the soil is best adapted to them, and the remaining fifth, firs, beech, elm, or any other trees suited to the fancy of the planter, or the nature of the soil.—J. T.

In the other districts of the Riding, few plantations of considerable extent have yet been made, and none which in the execution afford any peculiar information. In Holderness, the late Mr. Constable, of Burton-Constable, planted about forty-two acres with different trees, now growing well. Messrs. Telfords likewise have made some plantations in the reclaimed car-grounds; but as their chief object was shelter, and they consist of a great proportion of Scotch firs, they are no way farther worthy of notice, than as answering their intended purpose. Henry Maister, Esq. has made some considerable screen-plantations upon the embanked warp-land at Winestead, which are in a vigorous state of growth.

In Ouse and Derwent Wapontake, the Messrs. Dodsworth have a plantation of about 100 acres, chiefly consisting of Scotch fir, with some oak and larch, which are thriving. Mr. Gray, of York, has lately purchased about 100 acres of low-priced sandy land, near Barnby-on-the-Moor, for the purpose of planting as an object of profit; as have also Mr. Russell, of York, and some other persons, in the same neighbourhood, and with the same view; but they have been so lately executed, as to afford nothing particularly worthy of remark. Near Houghton, the seat of Philip Langdale, Esq. are some considerable plantations, consisting chiefly of Scotch firs. The land about this place is sandy, and in it's natural state covered with ling (heath). Here the Scotch fir propagates itself abundantly from seed, and thrives admirably.

The remaining plantations of the Riding, of which there are several, are quite inconsiderable.

From the above statement it will be evident, that timber throughout this Riding must be very scarce; and that far from providing any resource for the navy, it depends chiefly on the surrounding country for the supply of it's own internal consumption.

The present (1810) price of timber is, for oak of small dimensions for country use, about 3*s.* per cubic foot; of larger size, and for more valuable purposes, 5*s.* to 6*s.* Ash from 2*s.* to 3*s.* Larch has not yet got to a size to be saleable as timber, and consequently has no fixed market price. Foreign timber can scarcely be procured at any price; but American pine, of very inferior quality, and applicable to few purposes, has been sold at 4*s.* to 5*s.* Baltic Timber at 6*s.* to 7*s.*; and all these prices are probably aggravated to the consumer by a long land-carriage. *The timber-trade has left us, and we are put to great difficulties for a supply: hence, many improvements which would have been executed, are at a stand, or are unattempted.*

Under these circumstances, every encouragement ought to be given to planting, and to the individuals who are willing to expend a present capital for a distant profit and the benefit of futurity: and no doubt if encouragement were held out by the Legislature to those who would plant land of little value, many spirited and opulent individuals would undertake it on an extended scale, to the great and not distant benefit of the country and themselves. It may not be improper to hold it out as an object worthy even the attention of the Board of Agriculture, to suggest such a plan to the Legislature, and to promote it with all their knowledge and influence. Much less ought Government to countenance any thing, which would depress that spirit, at a time when our inveterate foe is closing the

Baltic against us, with the view of depriving us of many materials necessary for the improvement of the country, and the support of it's manufactures and it's marine. But this has lately been done to a very prejudicial extent, and as it should appear, contrary to the intention of the Legislature, by the Board of Taxes directing an assessment, under the Act, imposing a tax upon property, to be laid upon all land planted with trees. This has accordingly been done, and generally levied, though nothing under the Act appears to warrant such assessment. Where land of small value has been planted, it has been held by that Board to become more valuable by being so planted. Now, without considering the impolicy of thus destroying a speculation more useful to the public than the individual who ventures upon it, nothing can be more unjust than thus to tax a property in the progress of it's creation, and perhaps many years before it produces any thing; while the proprietor is deprived of the rent of his land, and the interest of his capital for so many years, in order to create a profit taxable as soon as actually brought into existence; but such is the fiat of the Board! As well might a merchant be taxed on the supposed profits of a cargo sent abroad, at the time of the ship's sailing; whereas all he should properly pay would be ten per cent. upon his actual profits, as soon as they came into his possession! If the payment of this tax upon plantations continue to be insisted on, it will be attended with the most fatal consequences.

As before observed (Chap. VI.) a very general neglect prevails in the planting of hedge-row timber. Whenever a new inclosure is made, or a new fence planted in the low country, an oak and an elm[a] should be planted alternately at the distance of seven yards between each plant; and on the Wolds the ash (the indigenous tree of that country) should be so planted. This system would not only tend greatly to beautify and improve the country, but would afford a large supply of timber without any loss of land. To all which advantages, the plan of taking off the corners of fields for plantations, before proposed, would form a material contribution.

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[a] The narrow-leaved elm is sometimes objected to as a hedge-row tree, on account of the great number of lateral shoots, or off-sets, which it throws up from the roots: to remedy this inconvenience, the nursery-men now ingraft it upon the Wich-elm stock, which is not liable to the same objection, and which, being easily propagated by the seed, enables them to afford this elm at a much lower rate.—H. S.

CHAP.

CHAPTER XI.

WASTE LANDS.

THE Waste Lands of the East-Riding, properly so called, are of small extent, and so incapable of improvement, that no useful information can be given under this head. Some fruitless efforts have been made under Acts of Inclosure to cultivate weak and barren tracts, chiefly in the sandland district, as noticed in a former Chapter, and the land has been again abandoned; some plantations, however, have been made with a much better prospect of success; this indeed appears to be the only practicable mode of deriving profit from such soils. But where this resource cannot be had, by reason of the land being leasehold for lives, or under some similar tenure, no prospect of improvement remains.

CHAPTER XII.

IMPROVEMENTS IN GENERAL.

SECT. I.—DRAINING.

EXTENSIVE Drainages have of late years been executed in this district; and little land, which is capable of improvement by such means, now remains undrained.

The Drainage, known by the name of the "Holderness Drainage," lies chiefly adjoining to and on the east-side of the river Hull. It extends from north to south about eleven miles, and contains, by survey, 11,211 acres. Previously to the execution of this undertaking, much of the Level was of small value, being usually covered with water for above half the year; and in some parts were extensive cars or lakes. The winter of 1763-4 being unusually wet, the water on the west-side of the river Hull was higher than the common, and occasioned a breach in the bank of the river near the upper end of the Level, by which the whole of it was overflowed, together with part of the townships of Stoneferry, Marfleet, Bilton, Preston, Southcoats, and Drypool; the turnpike-road between Hull and Hedon, for nearly four miles, stood from two to four feet deep in water, as did likewise that leading from Whitecross to Beverley, and persons going to market were obliged to pass in boats.

In 1762, an Act of Parliament was obtained for draining the Level, the execution of which was vested in trustees; every owner of two hundred acres and upward being empowered to appoint one trustee, and no owner of whatever quantity being permitted to appoint more than three. The Act limited the expense to 25,000*l.* but at the same time authorised four-fifths of the owners in number and value to exceed that sum, if it should be found necessary for carrying the Drainage into complete effect.

In pursuance of this Act, the trustees appointed five commissioners, who made a calculation of the probable improvement, as a criterion to proportion the expenses, and in 1775 levied an assessment for 24,000*l.* Since that time engineers have been consulted on the farther improvement of this Drainage, and the consent of the proprietors has been obtained for raising farther supplies, amounting at the present time (1808) to about 30,000*l.* more. The annual expenses of keeping in repair the drains and works, amount from 600*l.* to 800*l.* The Drainage, though still imperfect, has made a great improvement in the adjoining lands, many of which from having been of little or no value, are now let from fifteen to thirty shillings per acre, and this has been accomplished at somewhat less than 5*l.* per acre.

The Beverley and Barmston Drainage, lying parallel to the last, but on the contrary side of the river Hull, extends from Barmston, along the course of that river, nearly to Kingston upon Hull; a distance, as measured upon the map, of about twenty-four miles.

The Act of Parliament for executing this Drainage, was obtained about the year 1792. It is divided into two parts, the upper or more northern of which, containing 2136 acres, extends from the township of Foston to Barmston, where it has an outfall into the sea. The lower, or southern part, commences from the same point, and falling southward has it's outlet into the river Hull, at a place called Wincolmlee, near the town of Hull. It contains 10,432 acres. This Drainage, though not yet (1811) quite completed, is, as far as it is finished, very effectual, as the water in the drains stands usually three or four feet below the surface of the land. If the banks of the river Hull can indeed be made strong enough to resist the water of floods, it is believed that the low-lands will never be flooded again.

The expenses of this Drainage hitherto incurred, amount to 135,000*l.* or about ten pounds fifteen shillings per acre, and the average improvement of the land is fourteen shillings per acre per annum, which is thus paying an interest of rather more than 6*l.* per cent. per annum on the capital expended. But as the annual expense of keeping in repair the drains and works amounts to between twelve and thirteen hundred pounds, or two shillings per acre, the clear interest is reduced to little more than 5*l.* per cent. per annum; so that, however the public may have been benefited by some land, heretofore waste, being brought into cultivation, it appears to have been an unprofitable undertaking to the owners of the soil, as expenses yet unknown are to be incurred. The land, before the Drainage, was of some value; some accommodations and advantages which they previously had have been lost, much risk is to be run, which may greatly lessen the present interest, and that interest is but common interest of five per cent.; *but the movers and undertakers of the business have probably made*

made fortunes, which they otherwise never might have possessed.

An Act of Parliament for the Harford and Derwent Drainage was obtained in 1800, and the execution of it vested in three Directors and three Commissioners, specially appointed by the Act; with a clause prescribing, that any vacancy (by death or resignation) in either body should be supplied by election, at a meeting of Proprietors convened by public advertisement, on the requisition of the two remaining Directors, or twelve Proprietors, with at least fourteen days previous notice, for that express purpose.

The Level in question contains upward of 10,500 acres, of which nearly 4,500 are situated in the East-Riding. The expenses are not limited by the Act to any specified sum, but the Drainage has been completed at a total of 41,612*l.* being nearly at the rate of 4*l.* per acre. As the land, however, has been benefited to the amount of 17*s.* per acre, after paying the annual assessment, the disbursements are paying an interest to the Proprietors of about 2¼*l.* per cent. per annum.

The Directors have a power to levy an annual assessment, not exceeding an average of three shillings per acre, for the purpose of maintaining and repairing the existing works and drains, and also of farther making such new works as may from time to time become necessary. This assessment, in consequence of a late highly-unpropitious season, by which the works and drains received considerable damage, has hitherto been unavoidably levied to it's full amount, and from some circumstances connected with the Drainage, it is not very probable it can speedily be reduced.

The smaller division-drains and ditches are to be cleansed and kept in repair by the owners and occupiers, subject to the control of the Directors.

In the year 1772, an Act of Parliament was passed for draining 2500 acres of land, lying in several townships in the south-eastern part of Holderness. The outlet of this Drainage, called "the Keyingham Drainage," was at a place between Sunk-Island and the mainland, appropriately called "No-Man's-Friend." In process of time it was found, that by the vast accretion of land between Sunk-Island and the shores of Holderness, (to which it has now been for several years united;) and the rapid accumulation of mud, in the channel which conveyed away the water from the mouth of the Drainage, it had become wholly inefficient, and a new Act was obtained in the year 1802 for repealing the former one, altering the course of the Drainage in some parts, and including an additional quantity of land, making in the whole 5505 acres.

This Drainage is now divided into two parts, having distinct outlets; the eastern part, commencing at Sand-le-Mere, discharges itself into the Humber at a place called "Stone-Creek," and is in length, with a branch diverging from it, about fourteen miles. The other lying a little to the north and west of the former, commences at Aldborough, and empties itself also into the Humber, at a place called "Hedon Haven," being in length about eleven miles. The execution of this Drainage is vested in three Commissioners named in the Act, and on a vacancy occurring by death or resignation, the remaining Commissioners are required to give notice to the Proprietors, who at a public meeting are to supply the vacancy, each

Proprietor of forty acres and upward being competent to vote, and two Proprietors of a smaller quantity each, being entitled to give one vote by proxy.

The whole expenses of the Act, and completion of the works, amount to 30,000*l.* or about 5*l.* 9*s.* per acre. Prior to the commencement of the works, the Commissioners made a valuation of the low grounds, and subsequent to the completion of them, they made an estimate of the improvements which had been effected, amounting to 2457*l.* per annum, which is equal to rather more than 8*l.* per cent., and the total expense of the improvement is little more than twelve years purchase. But the above estimate may be considered more as a scale of the proportionate value of the land for laying on the tax, than the real value of the land, as it has in most cases been let for much higher rents than the valuation of the Commissioners, by which the number of years purchase of the improvements is reduced still lower, and the rate of interest is increased.

The Drainages of Spalding-Moor and Walling-fen were completed about thirty years ago, but the execution of them being combined under the same Acts of Parliament, with the allotting and inclosing of the respective tracts of waste, and also of a navigable canal, no estimate or comparison can be formed of their relative advantages. There are no other public Drainages of material consequence in the Riding.

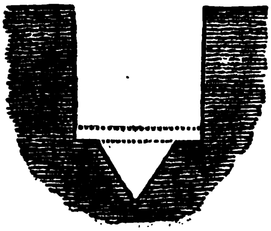
UNDER-DRAINING has, likewise, been practised on a great scale for many years past; upward of twenty years ago a capital improvement was made by it on the estate at that time belonging to Miles Smith, Esq. near Driffield. The soil was a strong, springy, tenacious clay, in most parts covered with an impenetra-

ble

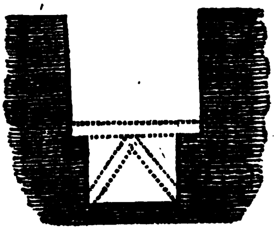
ble whin-bed; he cut off the "whins," (gorse or furze,) and cut drains from two to three feet in depth, the bottom of which he filled with the whins cleared from the surface. The improvement was immediate, and the land, which had previously been worth little or nothing, became at once worth from fifteen to twenty shillings per acre.

But the method of under-draining most frequently used in this district, is that of casting stones promiscuously to the bottom of the drain to the depth of nine or twelve inches, after which the sod previously taken from the surface is inverted upon them; or, where there is no sod, straw is used to prevent the soil from choking the passage of the water among the stones. Where stones cannot be procured, thorns or whins are made use of; draining-bricks also are occasionally, though too seldom, employed, as they form a complete and indestructible drainage.

An intelligent cultivator in Holderness has successfully employed the flat tiles, which he had removed from an old building, for the purpose of under-draining, as shown by the subjoined figure; the tile being expressed by the dotted lines.



The drains cost him from 8*d.* to 1*s.* per rood, running measure, not including the tiles, of which (as they measure 7 inches by 12 inches) it will require thirty-six thirty-six to complete a rood. This method will succeed where the soil is strong and firm; but if it be in any degree liable to crumble or run in, the space being small will be subject to choke up. In such soils, it seems probable that the method described by the figure annexed, will furnish a more complete and permanent drainage; for though the side spaces may be filled up, the centre one never can; and although (if the tiles are placed lengthwise in the bottom, and crosswise upon them, as in the above method) it will require about double the number, yet, as it is probable that old tiles of this description may be procured from the builders in most towns at a moderate expense, the cost will still not be great.



Where tiles cannot be procured, slates or thin flags will answer the same purpose.

SECT. II.—PARING AND BURNING.

THIS practice is in great repute in the East-Riding, and particularly upon the Wolds: on breaking up a piece of poor swarth, or worn-out Saintfoin-lay, indeed it may very properly be called the parent of all the ensuing crops, as no other manure can be procured to force a crop of turneps, on the success of which the future management entirely depends.

The best farmers on the Wolds, in taking up a piece of distant and barren swarth, pare and burn for turneps, which will in general produce a crop sufficient to pay the expenses, without any other manure; these they eat upon the ground by sheep, the treading and dung of which will ensure a good crop of turneps the second year; these are likewise eaten in the same manner; a crop of barley with grass-seeds follows, by which means the land is left perfectly clean and in good heart, and the seeds are certain to prosper. In this manner a great profit may be made, and the distant exhausted land, as described in Chap. vii. sect. 1, will be kept in a progressive state of improvement, requiring only the manure produced from the straw of the barley to be laid upon the seeds in the following autumn, to render the system perfect.

Paring and burning is, generally speaking, the most compendious, as well as the most profitable mode of breaking up poor or coarse old swarth; and there is little doubt that it is also the most expeditious means of improving the land, provided that all which so great a stimulus forces up be returned to it; but, unfortunately, that is seldom done in this country, the object of it being to obtain present crops, the manure from which is applied to other parts of the farm.

The old idea, that paring and burning diminishes the quantity of the soil, is here deservedly exploded by the more intelligent cultivators; it is true that the *apparent size of the heaps* is greatly reduced after having undergone ignition, but the diminution is produced by the dissipation of the moisture, and the incineration of the vegetables and their roots, of which the uppermost inch of the surface is almost entirely composed; not one particle of the soil is destroyed or lost, but it's fertility is increased by the action of the fire, as is proved by the great vigour of the plants on the spots where the heaps were burned, in comparison with the rest of the land.

But much of the success of this operation depends on it's being properly executed. The surface, which is pared off, should be as thin as possible; if it will but hang together, it is sufficient; and when it is moderately dry it should be heaped, and in burning great attention should be paid to prevent it from blazing or burning too dead; the more it can be made into the state of charcoal, the better; if it is burned to red ashes it is greatly reduced in value. After burning, the ashes should be perfectly spread, and ploughed in with a thin furrow as soon as possible.

It has been found useful on clay-soils to pare rather a thicker surface, and to burn it more than is above described; but this is done on quite a different principle from what is intended in other cases. The surface of such soils contains a smaller proportion of vegetable matter than that of most others; it can therefore produce little carbon; but such strong soils are in want of some substance to separate their parts and render them more easy of cultivation, which the surface thus burnt supplies, and which resembles, in some degree, a crumbled brick.

SECT. III.—MANURES AND COMPOSTS.

Farm-yard Dung.

THE systematic attention so obvious in some di tricts, to the preservation and increase of manure ar the forming of composts, is in this too much neglecte by the generality of farmers, and the application of it is likewise in great want of improvement.

It is too frequently the practice to apply it immediately from the farm-yard to the fallow, about midsummer, by spreading it upon the land from the cart which has brought it out. In this state it is often suffered to remain during several days before it is ploughed in, in the course of which time much of it is dried up and blown away, a great part of the fertilizing particles are evaporated, and what remains being little better than dry straw, cannot be effectually covered by the plough. But it is contended by some, and with apparent reason, that on strong clay-soils it is much more usefully applied in it's long and fresh state, than in that of putrefaction, as it tends more to separate and pulverise the soil. In this case, however, it should be immediately ploughed in.

The most profitable employment for the team whenever a frost or other leisure opportunity occurs in the course of the winter, is to carry the manure from the farm-yard to some convenient situation, (the nearer the better, as lessening the labour,) where, by being heaped up in a compact form, it undergoes a strong fermentation. This reducing it into less than one-half the space which it before occupied, the labour of carriage at the busy season is materially diminished, and the manure itself is prepared most perfectly for the soil as the food of future vegetation.

Some farmers preserve their manure until they have got a stock of one year's produce before-hand; but from this no particular advantage appears to result, as manure, by the above management, may be reduced to a fit state for being laid upon the land (which it is, when it admits of being cut out of the heap with a shovel) in much less time: if it be kept long after it reaches that state, it becomes crumbly and dry, and approaches fast to a fine mould, which, though it may be very rich earth, has certainly passed the period of perfection as manure, and a great loss by waste has ensued.

The application of manure to grass-land is here but little practised, the farmers erroneously supposing that when so applied it is lost, or at best produces but a very small return.

Lime.

The use of lime is very general throughout Holderness and Howdenshire, both of which are principally supplied with it from Knottingley, Brotherton, and Doncaster, in the West-Riding. From these kilns it is procured indiscriminately by means of water-carriage, though the lime from the two former places is extremely strong and beneficial to the land, whereas that of the latter is inimical to all vegetation. A striking instance of this fact occurs between Hedon and Hull, in a field adjoining to the Humber. A cargo of lime from Conisborough (which is always sold by the name of "Doncaster-lime") was landed from a vessel about seventeen years ago, and laid in heaps upon the land for a short time until it was spread.

Since

"the pure lime just mentioned, was only .42 of that "combined with it before it was burnt."

The lime produced from Wolds'-chalk, though occasionally used, is not held in high estimation; but whether the objections to it are well-founded, or otherwise, is uncertain, as no fair experiments appear to have been made to ascertain it's relative merit.

The quantity applied per acre varies from three to six chaldrons, of thirty-two bushels each; some farmers preferring a small dose frequently repeated, while others, with probably better reason, approve of an abundant liming, with a long interval before it is re-applied.

On the Wolds little or no lime is used, nor indeed is it necessary, as the soil abounds with calcareous matter without it.

Sea-Weed.

Sea-Weed, or (as it is here called) "Wreck," which is a mixture of marine animal and vegetable productions, is sometimes thrown upon the beach on particular parts of the coast in prodigious quantities after violent storms, and is procured with great avidity by the occupiers of the adjacent lands[c]. When a quantity of wreck appears, all hands are summoned, the neighbours assist each other, and every exertion is made by working day and night as long as it remains, since a change of the wind will frequently take it all away again. In order to facilitate the labour, it is usual to throw it up into large heaps in the nearest convenient situation, where it speedily acquires a violent fermentation, and a heat almost equal to boiling water, which reduces it to about one-fourth of it's former bulk. It is generally applied in the quantity of ten or twelve two-horse cart-loads per acre, to the land intended for turneps, for which it is an excellent manure. It is also spread upon the fallows for wheat, and sometimes upon grass-land, for which last purpose it is found, by experience, to be most beneficial when laid on fresh from the sea, and the same would probably happen in all cases, would the season admit of it.

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[c] I recollect, on one occasion, to have seen a bank of wreck cast up, occupying an extent of at least a mile and half in length, and in some parts full six feet in thickness; above a hundred carts were employed upon it for several days, and many thousand loads had been secured, when a change of the wind carried away the remainder. A great number of living lobsters were found among it, with a variety of other curious marine exuviæ.—H. S.

One instance only has presented itself of the application of sea-sand as a manure, or perhaps more properly as a corrector of a strong tenacious clay. It was applied to a field in the vicinity of Pattrington, at the rate of five hundred cart loads per acre, and it is stated to have been attended with no visible effect; but as it is now several years since the experiment was tried, and some of the circumstances are forgotten, no conclusion can safely be drawn from it. If the practice, so general at Yarmouth and other places on that coast, of using sea-sand instead of straw for the bedding of stables, cow-houses, pig-styes, &c. were adopted on all clay-land farms adjoining the coast, a vast increase of manure would be obtained at a cheap rate, and the soil would be gradually, constantly, and permanently improving in quality.

Compost.

A compost, made in the proportion of three chaldrons of lime, ten two-horse cart-loads of long stable-litter, and about sixty cart-loads of earth from head-lands or road-sides, has been found by the Surveyor, in the practice of ten years, to succeed completely, when applied in drills for turneps. The above quantity is sufficient for six acres, and the cost is as follows, viz.

		£.	s.	d.
Three chaldrons of lime, at 15*s*.	-	2	5	0
Ten loads of stable-litter, at 5*s*.	-	2	10	0
Casting earth 60 yards, at 4*d*.	-	1	0	0
Turning the heap, two men 2 days each		0	12	0
		6	7	0

or about 1*l*. 1*s*. per acre. The compost should be made about November, and in making it the materials must be laid in thin strata, particular attention being paid that a stratum of earth shall in all cases intervene between the lime and the manure, the latter would otherwise be too much reduced by the action of the former. The heap may be carried to any height, if care be taken to keep the strata in regular order, to place a stratum of earth at the bottom and another at the top, and to leave the surface flat in order to collect the rains. About the end of March the heap should be turned, by beginning at one end and cutting it perpendicularly down to the bottom in short lengths, by which means the materials are incorporated, and the mass completely reduced.

If ashes, pigeons'-dung, scrapings of roads, rotten leaves, and other rubbish, are occasionally thrown upon it, and the whole combined when it is turned in the spring, the mass will be superior for producing turneps, to the best rotten farm-yard dung that can be applied.

Bones

Have been used by a few persons in the East-Riding. They have been applied at the rate of from sixty to seventy bushels per acre, at the expense of 2*s*. per bushel. The most approved mode of application has been to lay the bones, broken into small bits, in a heap, and to cover it up to the thickness of six inches with earth. In this state they are suffered to remain for two or three months to ferment, and are afterward, with the soil which covered them, spread upon the ground for turneps. From this manure the first crop seldom appears to derive much benefit, but it's fertilizing qualities are conspicuous in every succeeding crop for many years. Hence it has been recommended to give a slight dressing of rotten manure along with the bones, in order to insure the first crop.

Soot.

This is applied as a top-dressing about the beginning of March to the young wheat, and to clover intended for mowing. It is spread upon the ground by hand from baskets, at the rate of about twelve bushels per acre, and at the expense of 1*s*. or 1*s*. 1*d*. per bushel.

Malt-dust, rape-cake, soap-boilers' lees, whales' blubber, sweepings of streets, in short whatever possesses any fertilizing qualities, are sought after and applied by those, who, living in the vicinity of large towns, have the means and the opportunity of procuring them.

Chalk

Has been applied with singular advantage, and to considerable extent as a manure, upon the Lincolnshire Wolds, and is coming into use in this Riding. It is laid on in winter, or early in the spring, that it may be mellowed by the frost, and at the rate of about forty or fifty two-horse cart-loads per acre, and is most beneficially applied to grass which is intended to be broken up for corn, or to land which is preparing for turneps.

Burnt Straw.

This is a practice which has very recently been adopted here, but is attended with the most advantageous effects. In many situations, particularly on farms of fresh land where a great quantity of straw is produced, and where the tenant is properly restricted by his landlord from selling it off his farm, it not unfrequently happens that the straw which is thrashed late in the spring cannot be converted into manure. In this case it is carried to the land, which is prepared for sowing with turneps, in it's dry state, and spread regularly over it at the rate of three or four waggon loads per acre, and set on fire at the point which is furthest from the wind. When it is burnt, the seed is sown upon the ashes, and both are harrowed in together. In this manner an excellent crop of turneps is almost insured at a very small expense of manure, as the straw, if reduced to short dung, would not properly cover a fourth of the space.

It is difficult to account with precision for the effect which is produced on the land by burning the straw, as in it's dry state, after having ripened it's seed, it can contain little vegetable alkali, and produces a very small quantity of ashes; the practice is new, and should be received with caution, until by further trial it has established it's merits.

SECT. IV.—WEEDING.

Of all the operations of husbandry, none requires more steady or more persevering attention than the subject of the present section, and few, speaking generally of this Riding, receive less. It is observable, indeed, that though the growing corn-crops are in most cases hand-weeded, or as it is here called "looked," yet it is very imperfectly performed, and little regard is paid to any weed except thistles, of which plant an abundant annual supply is derived from the banks, road-sides, and ditches, and not unfrequently from the fallows; a disgrace to the occupier, and a fruitful supply of work to his servants and those of his neighbours.

The weeds most generally prevalent on the arable lands are the following, which may be found in almost all situations, viz.

Corn Sow-thistle	*Sonchus Arvensis*
Couch-grass	*Triticum Repens*
Crake-Needle	*Scandix Pecten-Veneris*
Darnel	*Lolium Temulentum*
Corn Marygold	*Chrysanthemum Segetum*
Corn Chamomile	*Anthemis Arvensis*
Corn-Thistle	*Serratula Arvensis*
Bur-Thistle	*Carduus Lanceolatus.*

Those most usually found on strong soils, and such as have been long in tillage, are

Coltsfoot	*Tussilago Farfara*
Ox-eye, or Great Daisy	*Chrysanthemum Leucanthemum*
Horse-tail	*Equisetum Arvense*
Creeping Crowfoot	*Ranunculus Repens*
Dock	*Rumex Crispus*
Black Bent	*Alopecurus Agrestis.*

The following commonly affect shallow calcareous soils, viz.

Bind-weed	*Polygonum Convolvulus*
Brassic, or Wild Rape	*Brassica Napus*
Wild Mustard	*Sinapis Arvensis*
Charlock, or Wild Radish	*Raphanus Raphanistum*
Bugloss	*Echium Vulgare*
Toad-flax	*Antirrhinum Linaria*
Poppy	*Papaver Rhœas*
Corn Crowfoot	*Ranunculus Arvensis*
Haver	*Avena Fatua*
Blue Bottle	*Centaurea Cyanus*
Scabious	*Scabiosa Arvensis.*

And the under-mentioned are usually found on sandy, moory, or moist soils, viz.

Yorkshire-white	*Holcus Mollis* ——— *Lanatus*
Knot-grass	——— *Avenaceus*
Spurrey	*Spergula Arvensis*
Willow-weed	*Polygonum Persicaria*
Chick-weed	*Alsine media*
Cockle	*Agrostemma Githago*
Fern, or Bracken	*Pteris Aquilina.*

The means adopted for eradicating this numerous host of enemies, and probably several others of less notoriety, have hitherto proved quite inadequate: they continue to flourish in most places without abatement, and unless some more active measures be adopted, they will still continue to occupy a considerable portion of *that surface which is annually cultivated and manured, and for which the farmer annually pays rent and taxes for no other purpose than to produce them, and which is so much abstracted from the production of the food of man.*

The most usual methods employed in this district for the destruction of weeds, are the bare fallow and the turnep crop. The first certainly an efficient remedy for both radical and annual weeds, if properly executed; but that it is not so, though frequently repeated, is plainly demonstrated, by the variety and abundance of weeds which may be found in the corn crops in most parts of the Riding. The turnep crop, sown broad-cast, as it still almost universally is, although it tends to the extirpation of weeds, can never furnish a complete remedy, as it is sown too early to form a summer-fallow; and the hoeing which it afterward receives, even though it be perfectly executed, merely prevents the seeding of that summer's growth, without injuring either the root weeds or the seeds buried in the ground. It is by drilling alone, and by thoroughly cultivating the intervals, that much benefit can be derived from this crop as a cleanser of weedy land.

The plants before enumerated are those which delight chiefly in cultivated grounds; the following exclusively belong to the meadows and pastures, and rarely show themselves within the operation of the plough, viz.

Marsh Thistle	*Carduus Palustris*
Tansey	*Tanacetum Vulgare*
Nettle	*Urtica Dioica*
Buttercups	*Ranunculus Bulbosus* ——— *Acre*
Meadow-sweet	*Spiræa Ulmaria*
Rush	*Juncus Effusus*
Rest-harrow	*Ononis Spinosa* ——— *Arvensis*
Whin	*Ulex Europæus*
Knap-weed	*Centaurea nigra*
Rag-wort	*Senecio Jacobæa*
Cow-parsnep	*Heraclium Spondylium*
Wild Carrot	*Daucus Carota*
Bull-toppings	*Aira Cæspitosa.*

Several of the carices and mints also, which indicate a poor, cold, retentive clay, or a springy subsoil, and perhaps others which may not be recollected. Except the whin and the rush, little attempt is made to destroy any of the above troublesome weeds, and these are generally attacked by the plough: occasional mowing will destroy many of them, and where that does not succeed, they must be dug up by the spade, or drawn by hand, and the ground afterward manured, which by encouraging the growth of more valuable plants, will frequently overcome the weeds. A change of stock also will sometimes greatly assist; as the plant which is rejected by one species of animal, will not unfrequently be preferred by another. This is the case with the rag-wort, which will never be seen in a pasture frequented by sheep, though absolutely rejected by all other animals.

The English names of the above plants are those by which they are respectively the best known in the East-Riding, but the Botanist will readily ascertain the particular plant alluded to by the technical name annexed to it.

SECT. V.—WATERING.

THE only attempt at Irrigation, which has occurred in this Riding, was made by John Grimston, Esq. on his estate at Neswick, near Driffield. It succeeded perfectly, when sufficiently supplied with water; but the spring being merely a temporary one, (occasioned, like many others upon the Wolds, by the rains and snows of winter,) not commencing to run until the middle of winter, and gradually failing as the dry weather advanced, the regular supply of water was found so deficient as not to make the application of it a sufficient object, and the meadow has since been ploughed up. There are, however, many situations surrounding the Wolds on every side, to which Irrigation might be applied with the greatest benefit, and which would create a vast supply of hay and spring food, both which are much wanted in that district.

It may not be improper, in this place, to record the name of a man, who, though in an humble sphere of life, has rendered a more essential service to the East-Riding, and to every other part of the kingdom where his plan has been adopted, than the generality of his richer and better-educated contemporaries. About the year 1775, Robert Gardener, a native of Kilham, and by profession a well-sinker, invented the artificial drinking-ponds, now in universal use upon the Wolds, and without which, under the present system of husbandry, many parts of them would scarcely be habitable for either man or beast. Prior to their introduction, a continuance of dry weather was of all things the most dreaded upon the Wolds; and there are instances still in recollection, of cattle and sheep being driven, and water conveyed for the use of families, for the distance of seven miles, and of numbers of animals having perished of thirst; the recurrence of which, by the ingenuity of this man, is in all human probability for ever prevented. He died in great poverty about the year 1798, being killed in the exercise of his profession by the slipping in of a well; and having derived no other benefit from his invention than the money which he received for making the ponds, a small subscription made for him by some gentlemen on the Wolds, and a premium of about 10*l.* which was granted him (by the Society of Arts?). As the method of making them is detailed at length in the Annals of Agriculture, VI. pp. 28, 157. and in Tuke's North-Riding Survey, p. 242. it is scarcely necessary to repeat it here.

SECT. VI.—EMBANKING.

THE chief part of the land adjoining to the Humber and the Ouse, from near Spurn-Point to within a few miles of York, lies below the level of the water at high tide. From Paul to Hull, and from thence upward, the bank is of very ancient date, and the period of it's formation is not known. From Paul downward, a bank of recent construction, some parts of it being quite new, extends south-east to Sunk-Island, round which it turns to the north-east, and again stretching to the south-east, terminates against a ridge of higher ground near Spurn-Point. As the spring-tides rise against many parts of this bank to the height of seven or eight feet, and the mouth of the Humber opening to the south-east exposes it in violent gales to a heavy surf, and great accumulation of water, it requires to be made with considerable care, and of great strength, to enable it to resist the pressure of the water.

In making a bank against the tide, the slope of the side next the water, which is the strength of the bank, is proportioned to the height to which it requires to be made. A bank of seven or eight feet in height, will be strong enough with five feet slope on the water-side, and one foot and a half on the land-side, for every foot in perpendicular height, in which proportion a bank of eight feet high would require to be set out with a base of fifty-two feet, if it were intended for the slope to run out to an edge at the top; but as many persons prefer having a flat of three or four feet on the top, which makes the bank stronger, that breadth must be added to the base. If the bank be required to be ten feet high, the slope should be seven feet on the water-side, and two feet on the land-side, to one foot in perpendicular, which, with four feet flat on the top, would require a base of ninety-four feet. These proportions, if the middle be filled solid and firm, will make a bank capable of resisting almost any power, if the water do not overtop it. In situations less exposed to the influence of the tides, or against rivers subject only to slight floods, a less proportion of slope would be sufficient; probably from three to four feet on the water-side, and from one foot on the land-side, to a foot in height, would in most cases form a bank of sufficient strength.

The making of these banks is commonly let to one undertaker at a certain price, which varies, according to the height and other circumstances, from 4*s.* to about 5*s.* per floor of 441 square feet, measured on the base.

In taking in a piece of land from the sea, the embankment is begun from each end, and the water is allowed to flow in and out at the lowest place, until the banks approach nearly to it, when a floodgate is made, and at neap tides all the hands that can be got are collected, and the opening is closed as quickly as possible; and if a little water be admitted before it is quite closed, it escapes again at low water by the floodgate, which afterward serves to let out the drainage-water.

CHAPTER XIII.

LIVE STOCK.

SECT. I.—CATTLE.

THE Holderness or short-horned Cattle, which are remarkable for their large size and abundant supply of milk, prevail universally throughout the East-Riding. This breed appears to be similar to that of the United Provinces and the north-western parts of Germany, and has probably been introduced thence at some distant period into Holderness, whence it has extended itself to distant parts of the kingdom.

About seventy or eighty years ago, one of the St. Quintin family introduced a bull and some cows from Holstein, which were similar in appearance to those already in Holderness, but possessed some qualities superior to them: of these the descendants could be traced for many years afterward in the neighbourhood of Lowthorpe, where they were kept. Others have since been imported from Holland into the East-Riding, strongly resembling the breed of this country[d].

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[d] Mr. John Charge, of Newton, near Darlington, an eminent breeder of short-horns, informed me, that all the best families of Cattle in that neighbourhood, could be traced to a bull and some cows introduced from Holland about a century ago, (by an ancestor of the Huttons of Marske?)—a strong corroborating evidence, that the short-horned or Holderness breed is not indigenous, but introduced.—H. S.

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The cows of the unimproved, or original Holderness breed, are of a very large size and strong bone, have wide hips, a thick hide, and flat sides, with but little disposition to become fat, but give a great quantity of milk, the generality affording from two to three gallons twice a day. Many indeed may be found, which give eight gallons per day; and there are instances of a still greater quantity. The milk is also rich in quality, as there are instances of 16lbs. of butter (18 oz. to the lb.) being produced weekly from one cow, for several weeks after calving.

This breed of cattle is distinctly marked by it's colour, being variously blotched with large well-defined patches of deep red or clear black, in some families of dun or mouse-colour on a clean white ground; they are never of a brindled or mixed, and rarely of one uniform colour.

The late Sir George Strickland, Bart. was the first improver of the breed of short-horned cattle in the East-Riding, having been arduously engaged in this pursuit for the last forty years of his life; and the prices which the breeding-stock upon his farm sold for subsequently to his death, in 1808, (the highest which had ever been given for cattle of this breed at that period,) evinced that his endeavours had been attended with success. The stock consisted of ninety-four lots, comprehending

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As a farther proof of this race having been originally brought from the opposite coast of the Continent, it is said that an excellent breed of the short-horned cattle, perfectly resembling the best in this country, is met with throughout the state of New-York, in North America, a country originally peopled by the Dutch, and in no other part of the United States.—W. S.

comprehending males and females of all ages, and the aggregate amount was 2266*l.* 13*s.* 6*d.* or equal to 24*l.* 2*s.* 3*d.* each, one lot being sold for 111*l.* 6*s.*

Of later years several others have adopted the same pursuit, and it is now become very fashionable and likely to effect a great and permanent improvement in the cattle of the Riding. One very excellent stock of short-horns was introduced into the Riding a few years since from the vicinity of the Tees, by Mr. George Coates, of Driffield, (an eminent breeder of cattle and Leicester sheep,) who exhibited to the public a very beautiful heifer as a specimen of it, and who has since sold a bull of the same breed for 500 guineas.

Many bulls have latterly been purchased and hired into the East-Riding at high prices from the neighbourhood of Darlington, in the County of Durham, where a much superior breed of short-horns are found, possessing all the perfections and qualities which are wanting in the Holderness breed. They are smaller in size, lighter in the bone and hide, and have a much greater propensity to become fat. The introduction of this breed has, in a considerable degree, brought with it the qualities of the parent stock; and some of our most attentive and experienced breeders are making a rapid progress to that point of perfection so observable in Teesdale. But though symmetry of form and a greater inclination to become fat have been obtained by this cross, it has considerably diminished the quantity of milk afforded by the old breed. The two qualifications, indeed, are rarely united in the same animal. This circumstance is, however, of less consequence in the East-Riding, than it would be in many other parts of the kingdom, as it is almost entirely a breeding and grazing country, and milk is therefore less an object of attention.

Holderness, though it produces many cattle within itself, is unable to afford the supply demanded by it's grazing grounds; and accordingly great numbers of four and five years old oxen, and barren cows of all ages, are purchased by the graziers from the Wolds and at the York fortnight cattle-markets; many oxen are also annually purchased by drovers at the fairs and in the breeding parts of the Riding, and taken into Lincolnshire to be fed in the rich pastures of the fens, whence they are commonly driven forward to Smithfield.

Some of the most knowing judges of cattle affect to pay no attention to the size, colour, form, &c. of the horns of animals, as being non-essentials, and therefore not to be regarded; but in the opinion of many intelligent men, they afford a strong distinguishing mark, not only of varieties, but, in many cases, of the particular good or bad qualities of individuals in each variety possessing them. The Lancashire long-horn, the Yorkshire short-horn, and the Galloway or polled breed, are instances (with many intermediate ones) of the advantage of attending to the horn, or the absence of it, in distinguishing varieties; with regard to the properties of individuals, the very short horn turning directly inward, here called the "Buckle or Pincher-horn," is the certain mark of a kindly animal; while a very thick horn, or one which is of a dark olive green colour, are proofs of a coarse-fleshed and bad thriver. At the same time, implicit reliance must not be placed upon the judgment of the eye, without correcting it by the hand, which, with persons accustomed to the handling of cattle, will always be the final appeal, and without which no just idea of the merits of any animal can be formed.

Breeding and Rearing Calves.—A considerable proportion of the calves reared in this district, are the produce of the cows of cottagers and small farmers, who are usually quite inattentive to the breed or merits of the bull to which they send their cows, lowness of price being the only object by which their choice is influenced. If landlords would keep a well-bred bull for the use of their tenantry and neighbours, and allow them to breed from him gratis, or at so small a price as barely to pay for his keeping, it would tend more effectually and more cheaply to the improvement of the cattle of the district and the public benefit, than any premium or other steps which have been adopted for the purpose.

The farmers here wish in general to have their calves for rearing dropped between the beginning of February and the end of April, those which come much later in the summer not acquiring sufficient strength before winter to bear the cold without much nursing and care. They are usually fed with new-milk from the pail for the first three or four weeks, after which they are reduced by degrees to skimmed milk, which is continued till they are able to provide for themselves in a good pasture. When milk is scarce, the quantity is increased by adding to it hay-tea; which, if the calf be not less than a month old, will do very well in a moderate proportion, being superior to oatmeal porridge, which causes them to grow large in the belly, and become lean and ill-thriven. Some give boiled line-seed with milk, and others line-seed cake boiled, both of which answer the purpose. The method of rearing calves recommended by his Grace the Duke of Northumberland, and described in the Ann. Agr. Vol. I. p. 292, does not appear to have been tried in this district; but from the accounts given of it elsewhere, it seems more likely to succeed than any other which has hitherto been discovered.

Many calves are fatted for veal in the vicinity of Pocklington, where a weekly market is held for the sale of them throughout the season for the supply of York, Hull, Beverley, and other markets. They are chiefly fed by cottagers and small farmers, who pursue no regular system, and seldom keep them more than four or five weeks. They ought to be fed three or four times in the day, and have a lump of chalk to lick. Beans or barley-meal, with a little salt, improves their appetite, and quickens their fattening. To cure a purging, boil ½ lb. powdered chalk, 2 oz. hartshorn-shavings, and ¼ oz. cassia, in four quarts of water; and give half a pint in the milk twice a day.

Hiring Bulls.—The Messrs. Collings, of Ketton and Barmpton, Mr. Mason of Chilton, and Mr. Charge of Newton; all in the neighbourhood of Darlington, and other eminent breeders in that part of the country, have let and sold many bulls into this Riding at great prices; and several well-bred bulls and heifers are occasionally purchased at the fair held on Easter-Monday at Darlington.

It is to the skill, intelligence, and perseverance of the Messrs. Collings, (the Bakewells of the North,) that the country is indebted for the very excellent breed of short-horned cattle, which, by careful selection and superior judgment, they have produced and widely disseminated, and for creating a spirit of improvement which is rapidly extending itself in every direction *.

Grazing

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* As a proof of the estimation in which this breed of short-horned cattle is held, not only by skilful judges from distant parts of the empire, *but in it's own immediate neighbourhood*, it is merely requisite to adduce the catalogue of Mr. Charles Colling's sale, which took place at Ketton on the 11th of October, 1810, in consequence of his having declined business.

Cows.	Gs.
1. Cherry, out of old Cherry, by Favourite, 11 years old. Mr. Nesham, near Durham,	83
2. Kate, by Comet, 4 years old. Mr. Hunt, near Darlington,	35
3. Peeress, out of Cherry, by Favourite, 5 yrs. old. Major Rudd, near Stockton,	170
4. Countess, out of Lady, by Cupid, 9 years old. Major Rudd,	400
5. Celina, out of Countess, by Favourite, 5 years old. Sir H. Ibbetson, Bart. near Otley,	200
6. Johanna, out of Johanna, by Favourite, 4 yrs. old. Mr. Witham, near Piersbridge,	130
7. Lady, out of Phœnix, by a grandson of Bolingbroke, 14 years old. Mr. Wright, near Darlington,	206
8. Laura, out of Lady, by Favourite, 4 years old. Mr. Grant, near Louth,	210
9. Cathleen, out of the daughter of the dam of Phœnix, by Washington, 8 years old. Mr. Parker, near Malton,	150
10. Lily, out of Daisy, by Comet, 3 yrs. old. Major Rudd,	410
11. Daisy, out of Old Daisy, by a grandson of Favourite, 6 years old. Mr. Bower, near Malton	140
12. Cora, out of Countess, by Favourite, 4 years old. Mr. Johnstone, near Scarborough,	70
13. Beauty, out of Miss Washington, by Marsk, 4 years old. Mr. Wright,	120
14. Red Rose, out of Eliza, by Comet, 4 years old. Mr. Fenton, near Doncaster,	45
15. Flora, by Comet, 3 years old. Lord Lonsdale,	70
16. Miss Peggy, by a son of Favourite, 3 years old. Mr. Hill, near Nottingham,	60
17. Magdalena, by Comet, 3 yrs. old. Mr. Champion, near Bawtry,	170

Bulls.

Grazing is here carried on to a considerable extent. The oxen for fattening are commonly four or five years old, having been wintered on straw. After getting usually a little hay or a few turneps in the spring, they are turned into the pasture about the beginning or middle of May. If, however, they do not happen to be in good condition at that time, or the summer should prove wet, they will not be ready for the market before the prices decline in the autumn, which greatly reduces the profit. If the grazing-farmer would preserve a field of his best after-grass unpastured

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Bulls.	Gs.
18. Comet, out of Phœnix, by Favourite, 6 years old. Messrs. Wetherill, Trotter, Wright, and Charge, near Darlington,......	1000
19. Yarborough, by Cupid, 9 years old. Mr. Nesham, ...	55
20. Cupid, out of Venus, by a son of Favourite, not sold.	
21. Major, out of Lady, 3 years old. Mr. Grant, ...	200
22. Mayduke, out of Cherry, 3 yrs. old. Mr. Smithson, near Otley,	145
23. Petrarch, out of Venus, 2 years old. Major Rudd,...............	365
24. Northumberland, by Comet, 2 years old. Mr. Buston, near Stockton, ...	60
25. Alfred, out of Venus, by Comet, 1 year old. Mr. Robinson, near Stockton, ...	110
26. Duke, out of Duchess, by Comet, 1 year old. Mr. Smith, near Wooler,..	105
27. Alexander, out of Cora, by Comet, 1 year old. Mr. T. Sykes, near Malton, ...	60
28. Ossian, out of Magdalen, by Windsor. Lord Lonsdale, ...	76
29. Harold, out of Red Rose, by Windsor. Mr. Lorraine, near Newcastle, ...	50
Bull Calves.	
30. Ketton, out of Cherry, by Comet. Mr. Bower,....................	50
31. Young Favourite, out of Countess, by Comet. Mr. Skipwith, Lincolnshire,..	140
32. George, out of Lady, by Comet. Mr. Walker, near Bawtry,....	120
33. Sir Dimple, out of Daisy, by Comet. Mr. Barker, near Richmond	90

34. Narcissus,

unpastured for his feeding cattle to occupy from Lady-day to May-day, while their summer-pasture is growing, they would be forwarded a month or six weeks in fattening, which would probably obtain for them an addition of one shilling, or one and sixpence per stone.

The four and five years old oxen of this breed will weigh, when fat, from 70 to 85 st. of 14 lbs. and upward; but one of the greatest perfections of the improved short-horns is, their propensity to become fat at an early age, as before they are four years old they

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	Gs.
34. Narcissus, out of Flora, by Comet. Mr. Wright,	15
35. Albion, out of Beauty, by Comet. Mr. Booth, near Catterick,	60
36. Cecil, out of Peeress, by Comet. Mr. H. Strickland, near Bridlington,	170
HEIFERS.	
37. Phœbe, by Comet, 3 years old. Sir Henry Vane, Bart.	105
38. Young Duchess, by Comet, 2 yrs. old. Mr. Bates, near Hexham,	183
39. Young Laura, out of Laura, by Comet, 2 years old. Lord Lonsdale,	101
40. Young Countess, out of Countess, by Comet. Sir Henry Ibbetson, Bart.	206
41. Lucy, by Comet, 2 years old. Mr. Wright,	132
42. Charlotte, out of Cathleen, by Comet. Mr. Robert Colling, near Darlington,	136
43. Johanna, out of Johanna, by Comet. Mr. Johnstone,	35
HEIFER CALVES.	
44. Lucilla, out of Laura, by Comet. Mr. Grant,	106
45. Calista, out of Cora, by Comet. Sir H. Vane, Bart.	50
46. White-Rose, out of Lily, by Yarborough. Rev. Thomas Harrison, near Malton,	75
47. Ruby, out of Red-Rose, by Yarborough. Mr. Bower,	50
48. Cowslip, by Comet. Lord Lonsdale,	25

The total amount of the 47 lots (one being unsold) is 6073*l.* 4*s.* or nearly 130*l.* each.—H. S.

they will reach from 55 to 65 st. of 14 lbs. This is certainly the most beneficial system, where breeding and grazing can be united; as it enables the breeder to keep a larger proportion of each age, gives a quicker return of profit, and from the comparative lightness of the cattle, does less injury to the ground by treading. It is very doubtful, indeed, whether any other breed of cattle in the kingdom is capable of affording so early and so large a profit.

Stall-feeding is practised to a considerable extent, both casually for making-up such cattle as have not got fat upon the grazing-pastures during the summer, and also systematically by some who have no grazing-pastures to fatten off each year's produce of cattle. During the early part of the winter, turneps and hay are their chief food; but after the middle of February, when turneps begin to decline in goodness, it is usual to add a little barley or bean-meal, or oil-cake, although the latter has long borne so high a price, that it is doubtful whether any profit is derived from the use of it. Boiled potatoes and Swedish turneps are also occasionally employed as spring-food.

Drawing Oxen.—About forty or fifty years past, oxen performed all the heavy work of the farm in this Riding, particularly on the Wolds, where the carriage of the manure must ever be heavy work, in consequence of the villages being situated, for the sake of shelter, in the valleys, and the cultivated grounds being on the summits of the hills. These worked in pairs, preceded by a horse, drawing by yokes, two or four in a waggon, or wain, (a cart with a pole,) in which latter they performed their work with much greater facility and freedom than the former. The wain is now nearly forgotten, and the use of oxen was for many years almost entirely laid aside. Within these few years, however, a team of oxen may occasionally have been seen, and their use appears rather on the increase. The great demand of late for horses, and the high prices given for those fit for draft, have induced several people to part with as many horses as they could spare or sell, and adopt the use of oxen in their stead, a change which no doubt they would find greatly to their advantage.

SECT. II.—SHEEP.

There were formerly two distinct varieties of sheep in this Riding, viz. the Holderness breed, similar in appearance and character to that of Lincolnshire, and the Wold's breed. The former of these was a large strong-boned race, producing a long, open, loose fleece of very coarse wool, frequently weighing, through a whole flock, from 12 to 14 lbs. each. They possessed, however, so very little aptitude to fatten, that the wethers were always kept till three, and frequently till four years old, before they could be made fat, but they then arrived at very great weights. The latter, or Wold's breed, was a small, hardy, compact animal, accustomed to travel far for it's food, and producing a short, thick, close fleece of fine clothing wool, which enabled them to resist the cold of the climate. This sheep also was a slow feeder, being generally kept to four years old. Both these breeds were polled, with white faces and legs.

About forty years ago it became fashionable to increase the size of the sheep upon the Wolds, and the quantity of their wool; and this increase was obtained

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by the introduction of rams from Lincolnshire. These two breeds being so entirely dissimilar in size, form, and qualities, produced an ugly mongrel race, too large for the food of their bare pastures, and clothed with wool too short to comb and too coarse to card, while at the same time the animals themselves were bad thrivers, and subject to complaints before unknown upon the Wolds. The breeders, of course, soon found their error, and this cross did not last long. They then discovered, that by the substitution of rams from Bakewell's breed of Leicesters, they reduced the bone, improved the wool, and obtained a better form and a greater aptitude to fatten, and with these qualities a more profitable kind of sheep, which, under the improved system of husbandry since adopted, seem well calculated for all the less exposed situations of the Wolds.

The South-Down breed of sheep was introduced upon the Wolds a few years back, and is gradually extending itself. It is a species admirably calculated for bleak and bare situations, where they have to travel far for a supply of food, and where the bite is short. They are healthy and active, of smaller size than the sheep of the Wolds, less subject to several disorders, and admitting of more numerous stocking, in at least the proportion of one in six. There is one flock of upward of five hundred, and four or five other smaller ones. The value of their fleeces has always individually equalled, and in some years considerably exceeded, that of the long-woolled breed; but no comparison can fairly be made of their relative profit per acre, as they ought never to meet on the same ground. The land which is good enough to maintain Leicesters well, will not pay an adequate profit if stocked with South

Downs; and where the latter will thrive, the former would starve.

The sheep-breeders of Holderness have derived much advantage from a mixture of Leicester blood in their flocks, as promoting the tendency to fatten. But it is a general opinion amongst them, that the Holderness sheep, with not more than one-fourth of Leicester, is the sort best calculated for their rich pastures, preserving, in a great degree, the size and length of wool of the Holderness, but being lighter in the bone, and better grazers.

Folding has been much practised upon the Wolds, but is now chiefly confined to the few remaining open-field townships, and to the tops of steep hills distant from the farm-yard or from other manure. In the other parts of the Riding it never occurs.

Breeding.—The rams are commonly put to the ewes between the 10th and the 20th of October; but this is regulated by the situation of the farm, and the prospect of subsistence in the spring. After the ewes are with lamb, they are turned into the rough pastures or half-eaten after-grass, which the fatting cattle have done with, and are fed with hay when the ground is covered with snow. In these they remain until about a month or six weeks before they lamb, when they are put upon turneps, to give them a supply of milk. If they are put upon them at an earlier period, it is thought to render the lambs too large, and by making the ewes too fat to endanger them in lambing. The males are castrated, and the tails of both sexes are shortened, at ten days or a fortnight old; and the lambs are suffered to run with the ewes until a week or a fortnight after Midsummer, when they are weaned and put upon better food. To ensure an abundant produce of lambs, it is requisite that the ewes should be in an improving condition when the ram is turned to them; and to that end they are no better for being full in condition after weaning-time, if they are only kept well for a fortnight or three weeks before the ram is admitted[f].

Shearing.—This operation is performed more perfectly and neatly, and the sheep are less frequently wounded by the shears, since the present mode was adopted, than formerly. It has been practised about ten or twelve years, and is said to have been introduced from Lincolnshire. The shearer stands, with the sheep before him resting on it's rump, upon a low broad bench, and leaning against his left arm; he begins by cutting the wool from the throat down to the breast and off the belly, after which he returns again to the top of the neck, cutting the wool from the opening which he has made, to the ridge of the back, and proceeding thus to the tail, when he turns the sheep, or if he can use the left-hand (which is still better) changes his shears, and finishes the other side of the sheep in the same manner.

The old method was, to extend the sheep on it's side upon the bench, and cut off the wool lengthwise, frequently leaving nearly half a pound of wool upon the animal, and from the freedom of it's position, and it's consequent struggling, exposing it to be severely and even dangerously wounded by the shears. By this method, however, from thirty to forty sheep could be shorn in a day; whereas, by the new mode, the shearer cannot properly get through more than half that number. The most usual material for marking the sheep, is a mixture of pitch and tar, stamped upon them warm with an iron letter. Some few people use red paint for the same purpose; but it is long in drying, and the letter is consequently liable to be destroyed. Ear-marking is still practised, though less frequently than formerly, when the sheep of different proprietors ran together in the open fields.

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[f] A wonderful instance of fecundity occurred in the spring of 1805, in a flock of ewes of the large Holderness breed, belonging to a farmer in the neighbourhood of Beverley. He had 139 ewes in lamb, 18 of which produced three lambs each, 89 two lambs each, and 32 one each, collectively 264 lambs. The proprietor of this flock invariably pursues the above method, and never fails to have a great proportion of twin lambs.—H. S.

Watering.—Salving the sheep with an ointment composed of tar and butter, as was formerly practised, is now totally discontinued, as it was found to injure the colour of the wool, and by causing sand and dirt to adhere to it, to reduce it's value. It is now usual to water the sheep in the autumn with a decoction of tobacco in urine, to which is added a small quantity of spirit of turpentine. This liquor is made by boiling 1 lb. of tobacco in eighteen quarts of urine, then straining out the leaves, and adding one pint of spirit of turpentine. This quantity is sufficient for forty sheep, which it will effectually cure of scab, lice, and ticks. Some shepherds boil a small quantity of arsenic ("mercury") in the water; but if the skin be broken by scab, or any other cause, there is danger of the sheep being poisoned by the absorption of the arsenic into the system. Some, also, add a little soft soap to the liquor, with a view of improving the growth of the wool; this, however, appears to proceed upon an erroneous principle, as the alkali of the soap will rather destroy the natural oiliness of the wool, than increase it[*].

A very penetrating spirit, called by the shopkeepers "spirit of tar," as considerably cheaper, has been much used for watering sheep instead of spirit of turpentine; but it has been found to be extremely prejudicial to the sheep, and even to cause their immediate death, when incautiously applied in too large quantities.

This spirit, there is reason to believe, is not distilled from the vegetable tar, but from the mineral or coal-tar; and if this be the fact, it's deleterious qualities may probably be derived from some metallic or poisonous principle contained in the coal.

Diseases.—A disease has been very prevalent among sheep for the last few years, and has caused great devastation. This is called "rubbers," and it's origin has been attributed by some to the use of the spirit of tar, as it was first discovered about the time and in the flocks in which that drug was first used. The sheep are at first affected with great dulness, hanging their ears and head, and appearing unwilling to exert themselves; they soon afterward begin to rub to a great degree, tearing off the wool from their backs and necks, although there is not the least eruption upon their skins; they then become tucked up in the belly, and pine away. For this complaint no remedy has been discovered; and as it has become hereditary, the only way to get rid of it is, to change the whole flock, which in many instances has been found a necessary measure[h].

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[*] I have for several years prepared a lotion from arsenic, which answers, I think, better than any thing I have tried, for destroying every description of lice, clearing the skin from scurfiness, and preventing the fly from depositing it's eggs for maggots.

The recipe is, arsenic 1lb. to be suspended in a flannel bag in the vessel (not touching the bottom) and boiled for two hours, with 4lbs. of soft soap, and sixteen gallons of soft water. The operation is, to provide a tub similar to those used for scalding the hair from pigs, and for one person to take care that the head shall not touch the water, while two others immerge the animal in the water; it is kept there for a small space of time, and then lifted upon a sheep-cratch, placed across the tub, when the men press out with their hands all the water they can, after which it is set at liberty.

This is all I do to my sheep, and when labour and despatch are taken into the account, is the best I have known tried.

I invariably do this at shearing-time, so that the dam and the lamb are ridded of their filth at the same moment, and it is a wonderful preventative of the maggots.—J. L.

Ram-breeding.—There are several breeders of rams for the use of the public in this Riding, who, from the length of time during which they have hired rams from Leicestershire, and the high prices which they have given for them, very deservedly receive an ample remuneration. Although the profits of this business are rather kept secret, it is believed that rams bred in the East-Riding have been let for the season as high as one hundred guineas, and perhaps for more; and one of the leading ram-breeders in the Riding, who receives probably the highest prices, lets out generally to the amount of an hundred sheep in a season.

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[h] Another hereditary complaint, something similar, here called the "megrims," has been very destructive. It was at one time imagined to have arisen from crossing the long-woolled Lincolnshire sheep with those on the Wolds, it not being known before those crosses were introduced. The symptoms of it's first attack are, separation from the rest of the flock, drowsiness, and hanging down of the head; on a sudden surprise, however, the animal appears wild, and runs away jumping with it's tail erect like a deer. It is scarcely ever known to recover, wasting away to a mere skeleton, and appearing at last to die mad.—J. L.

Feeding off.—As the sheep of this country are fed off at an early age, they have not any time to lose, and it would not answer the purpose to let them at any time get low in condition. The wether lambs, therefore, when taken from the ewes, are turned to clover after-grass, or the best pasture which can be spared for them; they are sent to turneps early in the autumn, and in spring are put upon young seed-grass, where they remain all the summer. At the end of September these sheep, then a year and a half old, in high condition, and weighing from 20 to 24lbs. per quarter, are sent to Weighton fair. This is probably the greatest fair for fat sheep in the kingdom; and here almost all the shearling wethers and drafted ewes of the Riding, which are forward in condition, are sold, there being usually from 70,000 to 80,000 upon the ground. Of these, the principal part are bought up by jobbers and turnep-growers from the West-Riding, who keep them until the succeeding spring, and then sell them at Wakefield. Some of the ewes are bought for producing fat lambs, which are sold off early in the summer; and the ewes also get fat, and go off to the butcher, before their successors are bought in.

SECT. III.—HORSES.

There is probably no other part of the island of the same extent, which did produce so abundant, and still produces so valuable a supply of horses for the coach and the saddle, as the Riding under survey.

The Yorkshire bays have long been proverbially good, and it would be fortunate for this Riding and Cleveland, where they are chiefly bred, if the breeders would take due care to preserve the race pure and uncontaminated. They are stout, hardy, compact, and well-made animals, and at the same time clean-limbed and active; the stronger ones are admirably calculated for carriage-horses; and the mares, slighter horses, and such as have been crossed with the race-horse, are unequalled for the field, the road, and the army. But it is allowed by all, who are conversant with the subject, that the breed has of late much degenerated; nor is this at all surprising, when it is considered how inattentive the farmers are to it's preservation. If a particularly good filly foal is dropped, it may usually be purchased, and the best mares are commonly sold at four years old, such only being kept for breeding as are worth but little money.

Another cause has likewise operated strongly to the injury of the breed. About twenty years ago it became fashionable to introduce a cross of blood into this breed; and though many excellent horses for the saddle were thus produced, the true coach-horse was lost, and those which, from any accidental cause, were unmarketable, and of course condemned to the work of the farm, as well as those kept for brood mares, were, from their slightness, ill calculated for any useful purpose. This error was quickly discovered, and immediately produced an opposite and still more pernicious one, as it caused the introduction of a number of black-stallions from Lincolnshire and the midland counties, than which, for the greater part of this

Riding, there cannot be a more unfit or unprofitable animal. If the use of them indeed be persevered in, the indigenous breed of coach-horses will be irrecoverably destroyed[i].

The consequence of this cross is, that the produce are hairy-legged, heavy in their quarters, shoulders, and head, inactive and spiritless, and unfit for any purpose, except slow heavy draught; this purpose the first cross answers, where a farmer breeds merely for horses to work upon his farm without any view to profit, (which no one should do, as he may always get his work done by mares, and unsaleable horses,) yet what is he to do next? If he put a half-bred black mare to a coach-stallion, he can hardly expect to breed a saleable coach-horse, and it will be many generations before he will get quit of the mongrel blood; and if he put her to a black horse, the case will be still worse, as the produce will then be only calculated for a stage-waggon[k].

Breeding.—Few mares are kept professedly as brood-mares by farmers, the mares employed in the work of the farm being used for that purpose, and generally worked till a few days before they foal, after which they are allowed to rest for two or three weeks, when they again return to their labour. Some farmers shut up the foals while the mares are at work, and give them a little corn, while others suffer them to run by the side of their dams. The former is however in general, considered the better practice, as in the latter the foals are liable to be entangled in the chains, or injured by the treading of the other horses of the team. The foals are weaned about the middle of October, when they are kept for a short time in the stable, and are led about in halters, and accustomed to stand tied up. When the cold weather commences, they are taken into the house at nights, and have a little corn, but are suffered to stray in a pasture, or paddock, during the day. About the middle of April, when nearly a year old, the males are castrated[1], and recover from the operation usually by the time the pastures are ready for them. Some farmers also, who have a promising filly, will cover her at three years old, let her run with the foal at four, and sell her at five years old; a good practice, probably, as the foal from a young and healthy mother is likely to be healthy also, and stout from having a good nurse; the mare is likewise improved by being thus kept from labour a year longer than she otherwise would have been.

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[i] Very great injury has been done of late years to the Cleveland breed of horses, as well as that of this Riding, by crossing with black stallions. A more useful stock for the draught, the coach, or the saddle, is not to be found in the kingdom. There are among them horses seventeen hands high, of as fine form as the blood-horse, with power and strength equal to the black horse; the smallest sized ones make excellent coach and saddle horses, they have also the valuable property of being good thrivers. Unfortunately the pure breed is now too seldom to be met with. It is much to be wished, that the Agricultural Societies of those districts would take some steps to discourage the cross.—J. T.

[k] For a further illustration of this subject, see Marshall's Yorkshire, V. II. pp. 160. et seq.

At two years old the young horses are worked a little in the harrows, which makes them gentle and tractable; and at three they are bitted and backed, and worked during the early part of summer in the plough, after which they are again turned away. At this period, some farmers draw their corner teeth; and by the following spring their five-year old teeth are well up, and they are frequently sold to the dealers as five-year old horses. Other farmers defer drawing the teeth till the spring when they are four years old, and some do not draw them at all[m]. These work their four years old colts till about Midsummer, when they turn them into clover-fog or good pasture, and sell them fat to the dealers at the autumnal fairs.

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[1] Some are accustomed now to castrate the foal while it sucks at the mare, and commend the practice.—J. L.

The minutiæ of the art of making-up horses for sale cannot here be detailed, as it depends much on care and attention, and contains many secrets known only to it's professors. It comprehends indeed the whole practice of the groom; but the account given of it in the North-Riding Survey corresponds, as far as it goes, with the practice of this Riding also.

The principal fairs for horses of every description and price, are at Beverley, Howden, Malton, and York, to which many dealers from London, and all parts of the kingdom, resort. A fair is held annually on the 11th of October at Hull for foals, where a great number of colts are purchased by the Lincolnshire farmers and graziers. These keep them till they are four years old, when they are sold to the London dealers at Horncastle fair.

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[m] This is not a fraud committed by the breeder on the dealer, but by the dealer on the purchaser; because the dealer has therein a double advantage, as the horse is rendered more valuable by being thought five years old than it would be if known to be only four; and by being thus prematurely put to work, is prematurely worn out, and consequently the purchaser must sooner come to the dealer for another.— W. S.

The export-trade to Russia and Prussia, while it existed, took off annually from three to four hundred mares and stallions from this Riding, chiefly of the racing and three-quarters bred sort, with the gay coloured ones, such as roans, piebalds, grays, and chestnuts with white faces and legs, which do not in general suit the English taste. No geldings were exported, as they were subject to a high import duty, from which the others were exempted. This trade was a great encouragement to the breeding of horses, and tended considerably to their improvement, by taking away many inferior mares which were unsaleable at home, and from which the owners would certainly have bred, for the simple and sound reasons, that they had them, and that they were worth nothing else. It contributed likewise, by assisting the sale of inferior horses, to keep down the price of the comparatively few valuable and fashionable ones which are bred, as from one cause or another, not more than one out of nine or ten of the foals annually dropped, reach the best prices, or attain to the collar of a gentleman's carriage. Unfortunately this trade is at present at a stand; and had it not happened that of late some light mares have been admitted into the army, the breeding of horses, notwithstanding the very great prices which are given for some of the best, would prove an unprofitable concern.

The turf also contributes materially to the encouragement and improvement of the breed of horses; and it would be of still farther service, if the weights were increased; but one great incitement to horse-breeding is now nearly at an end, the high and increasing rate of taxation on servants, horses, and dogs, with other causes which have driven country gentlemen from their estates, has caused the discontinuance of the greater part of the packs of hounds in the kingdom. In this Riding, where twenty years ago three packs of foxhounds, and at least twenty packs of harriers, were constantly kept, there now remain only one pack of foxhounds, and three or four packs of harriers.

By these diversions the breed of the saddle and the coach-horse is promoted; without them nothing would be met with, except cart-horses, and ordinary hacks. From the time of the tax being laid upon horses, their number has been decreasing, and their price rapidly increasing. The operation of the tax has been greatly to diminish the number of horses kept by gentlemen in the country, upon whom it falls particularly heavy, in consequence of the necessity they are under of keeping a greater number than gentlemen of the same condition residing off their estates; and the inordinately increasing ratio of the tax in proportion to the number of horses kept, compels them to reduce the number as much as possible.

Thus this impolitic tax defeats it's own end, operating as a sumptuary, not revenue law; and gentlemen thus debarred of the use of an animal, which their own estates could alone produce, have not been active, as formerly, in encouraging the breed of it among their tenants, rather on the other hand discountenancing the produce of an animal which they could no longer make use of, and which probably never was lucrative.

Since the tax likewise has been laid upon the farmer, he has been forced to breed a stouter horse, that he may perform the work of his farm with a less number; and by the interpretation, in some places, put on the Tax-act, it has been held that young colts which he occasionally employs in the light work of his farm, by way of gentling them previously to their sale, are taxable if so worked, and the tax has likewise been paid for horses ridden only to be broken for sale.

Under all these discouragements, it will not be surprising, if, in a few years, horses for the saddle or the carriage become scarce and immoderately dear, where they were previously good, plentiful, and cheap.

SECT. IV.—PIGS.

CONSIDERABLE improvement is taking place in the breed of pigs in this Riding, and a large surplus is produced, which are chiefly driven into Lincolnshire, and thence many go forward to contribute to the supply of the brewers, distillers, &c. in the metropolis. The old sort, which were tall, thin, white pigs, with high narrow backs, flat sides, and long legs, were, about thirty years ago, greatly improved by the introduction of the spotted Berkshire breed, with large pendulous ears, which, though by no means perfect themselves, were superior to those of this county. These are now rapidly increasing in value by crossing with the improved breed of Leicestershire, which are remarkably quick feeders, and possess all the good qualities in which the others are deficient; they are broad on the shoulders and back, round in the rib, and very full in the ham, and can be fatted with much less food than was requisite for the ancient kind.

Much benefit has, also, in some instances been derived from a cross with the white Chinese breed,

which

which are by far the most thriving variety of pigs yet known, although for general purposes they are too small in size; they will however, undoubtedly, in a given time produce a greater quantity of human food, and at a smaller expense, from one individual, than any other variety or species of animal which is used for that purpose.

The rearing and management of pigs is deserving of more attention than it usually meets with; as no other part of the farm, either in live-stock or in agriculture, yields so much clear profit in proportion to the capital employed.

SECT. V.—RABBITS.

THERE are at present (1808) about twenty warrens in the East-Riding, containing together probably nearly 10,000 acres; a tract of land which, being under one particular management, in a great degree peculiar to the Riding, claims minuteness and accuracy in describing it.

It is a generally received opinion among the warren-farmers, that a great proportion of most of the warrens would produce nearly 50 per cent. more money per acre in cultivation than under warren, but that all land which is not worth more than 10*s*. per acre, according to the present value of land for cultivation, is more profitable in warren, although it actually produces less money, on account of the very great expenses attending arable land in seed, labour, tithes, and taxation, from most of which, land in the state of warren is exempted. It is contended, however, that all land above that value is unprofitably held in warren to the community, the landlord, and the tenant. The quality of the ground is stated by the advocates for warrens to be improved by the rabbits, in proof of which the productiveness of the land on being sown with grain is adduced; but it is not improbable, that this fertility may in part proceed from the long period of rest which it has enjoyed, and from the lightness and friability produced by the burrowing of the rabbits, independently of their dung; it being allowed that, *as a warren*, it continually diminishes in it's value, and capacity of maintaining rabbits, the longer it has continued in that state without being broken up.

In some of the largest warren-farms, it is usual to inclose a small part annually with a sod-bank, for the purpose of sowing it in rotation with turneps, oats, turneps, barley, and clover; this latter crop is mown the first year, and eaten the next by sheep or other stock, after which it is again thrown open to the warren. This system produces a considerable quantity of food for the rabbits and other live stock; but whether it makes much permanent improvement in the soil is extremely doubtful, as three crops are taken off without any return to the land, except the manure for the second crop of turneps; the consequence is, that two or three years after it's return to the warren, it usually appears worse than the old land.

Nearly one-fourth of the warrens, which existed in the East-Riding about forty years ago, have been broken up, and not more than two or three have been since established; some of the largest now remaining likewise are expected to be soon destroyed; strong proofs of the general opinion that they are in most cases comparatively unprofitable, and in all trouble-

some,

some, producing bad neighbourhood by the encroachments of the rabbits, and enticing into their vicinity a set of thieves and poachers ready for executing any species of villany.

Breeding.—The generality of warrens will carry about six couples per acre for a breeding stock, and will allow about ten couples per acre to be killed in the course of each season. The does breed commonly twice in the year, and will produce on the average about four young ones at each brood; the does likewise of the earliest spring broods will sometimes produce a brood the ensuing autumn; but notwithstanding this rapid increase, they have so many enemies to contend with, and are so liable to losses, by purging in the spring, by escapes in snow-time when the warren-walls are drifted up, by barren does, foxes, poachers, and other means, that two for one of the whole breeding stock is considered as above the average produce.

In first stocking a warren, one buck is turned down for two does; but no proportion is subsequently preserved, all which are taken being indiscriminately killed until about a fortnight before the conclusion of the season, when the warrener begins to select the breeding does, which he chooses by their size and the breadth of their loins, cutting off the tip of one ear as a mark. The inferior does and all the bucks are killed, it being supposed that a sufficiency will always remain untaken in the warren; as, if they are allowed to become too numerous, the breed is diminished by their scratching out and destroying the young ones in the nests. No cross or change of breed is ever introduced, although it is conjectured by many that it might prove beneficial.

Rabbits bred on sand are much inferior, both in skin and carcase, to those which are bred on the chalky soil of the Wolds; the higher indeed and the more exposed the situation, the better they are. A warren situated on the northern extremity of the Wolds is a strong proof of this fact, one part of it being a light blowing sand in the low ground, and the remainder extending to the summit of a very high chalk-hill directly exposed to the north. The furrier who purchases the skins from this warren has declared, that those bred on the hill are nearly of double the value of the others produced on the sand, and that he can distinguish every one of them among the parcel of skins. The flesh, also, of the rabbits from this warren is peculiarly dry and hard.

Sort.—The common gray rabbit is the variety in most general use, and most approved of; the black is preferred the next; then the silver-haired: and the sandy-coloured is considered the worst of all, the skins, from the inferiority of the fur, being deemed only half skins even in the best season. The skins of the silver-haired rabbits were formerly dressed as furs, and sent to China for cloak-trimmings; but this trade having failed, the breed is nearly given up, as they are less hardy, less prolific, and generally leaner than the gray.

Sale.—It is usual to dispose of the whole slaughter of the season to hucksters, some of whom engage the slaughter of three or four warrens at the same time, at a fixed price per couple (this season, 1808, 3*s.* 4*d.*, of which the skins are estimated at 2*s.* 4*d.* and the carcasses at 1*s.*). They are carried in covered carts, containing from six to eight hundred couples, strung on rods, and suspended across the cart one tier above another, to Leeds, Wakefield, Halifax, and other populous places, where the carcasses are sold. The skins are dried and reserved until the end of the season, when they are sold by the pack to people whose particular business it is to cut the fur from them. They begin to come into season about Michaelmas, and continue good until about Candlemas, a week earlier or later, according to the weather; after which all skins of rabbits killed till the ensuing Michaelmas, with those which are in any degree broken or injured by dogs or otherwise, though taken in season, are considered as half skins.

Cutting the Skins.—One of the greatest warren-farmers in this Riding has practised cutting the skins from his own warren, and has given the following account of the process. It is performed by women, at the expense of 2*s.* 6*d.* per dozen. The skins being cut open down the belly, are damped and stretched perfectly flat one upon another, after which a heavy weight is placed upon them. The wool is then shaved off with a very sharp semicircular instrument, similar to a saddler's cutting-knife. It is divided, as it is cut off, into five sorts; the best, which is from the back, sold in 1805 for 20*s.* per lb. of 16 oz.; the second, which is from the breech, sold at 18*s.* per lb.; the third, from the belly and throat, at 16*s.*; the fourth, from the head, called the "Pate-wool," sold at 14*s.*; and the fifth sort, from the tail, at 12*s.* Each skin, when in season, will produce about an ounce of wool.

Winter-food.—Rabbits never have food given to them, except in winter, and then only in severe weather. The best is clover or saintfoin-hay, given on alternate days with turneps, in quantities which they can eat up without waste: it is scattered upon the ground near the burrows. Meadow-hay is occasionally used when the other cannot be procured, and is given in small quantities along with turneps, as from it's dry and binding quality it kills many of them if given in abundance. If the weather is unusually severe, they are supplied with unthrashed oats, twice or thrice a week, to keep them in condition.

Methods of taking them.—The mode of taking the rabbits, in most general use, is by "Tipes," which are a sort of traps, or pitfalls, placed in different parts of the walls of the warren, and are made by sinking a pit, or chamber, five or six feet deep under the wall; their sides are walled with stone, to prevent the burrowing of the rabbits, and their tops are covered with timber on a level with the surface of the ground, a small passage only of six or eight inches square being left for the rabbits to pass through. On the floor of this passage is placed a double trap-door, each six inches broad and eighteen inches long, the opening parts of which meet together in the middle of the passage, and are so balanced that they return to their horizontal position the instant the rabbit has fallen through, and are thus ready for their next victim. The entrance to the tipe is always closed, except when rabbits are wanted, or when (the traps'-doors being fastened) they are allowed a run through for a night or two to accustom them to the tipe. In this manner immense numbers are taken; so great indeed is sometimes the run to a particular tipe, according to the wind or other accidental circumstances, that if they are not watched with great attention, the chamber would be filled, and great loss ensue from heat and suffocation: even if more than one thickness on the floor of the chamber is taken at once, they begin to sustain damage.

There are two other methods of taking rabbits in the warrens of this Riding, the first of which is in general, the latter only in occasional, use.

The "Fold-net" is a very long net, about four feet broad, and several hundred yards in length, which is spread between the breeding-burrows and the feeding-ground in the evening, the lower edge being held tight to the ground by sticks stuck upright at short distances. This net the rabbits cross in going out to feed, and the warrener passing quietly along a short time before day-break when they would return, raises it by twisting it's upper edge round the top of the sticks, thus intercepting their retreat: they are then hunted into the net by dogs trained to the purpose, and persons are stationed at regular distances to take them out and kill them as they get entangled. The few which escape into small burrows within the net, are dug out in the course of the day.

The "Spring-net" is similar to the last described, except in the manner of setting it. It can only be used with effect in severe weather, when it is set round a hay-stack, a heap of turneps, or in some similar situation. The stakes used for this purpose are stronger than for the fold, having a hole in the top through which a small cord passes, with other cords attached to it, which are also fixed to the net; a person placed in some convenient station concealed from the rabbits, when he sees a number of them inclosed, draws it up and prevents their escape.

SECT. VI.—POULTRY.

A FEW are kept in every farm-yard, and at most cottages, and a sufficiency is produced for the internal supply of the Riding at a moderate price, but there is no surplus. Fowls are purchased in the markets at 2*s*. 9*d*. to 3*s*. per couple, ducks at 3*s*. 6*d*. to 4*s*. per couple, turkeys at 4*s*. 6*d*. to 5*s*., and geese at 5*s*. to 6*s*. each.

SECT. VII.—PIGEONS.

A PIGEON-COTE is generally to be found as an appendage to each manorial-house, and they occur also at some few farms; but they are by no means numerous in this Riding; and as their inhabitants are great consumers of grain, they ought to be considered rather as an article of luxury than of profit. A small quantity of them, however, are commonly to be purchased in the markets at 5*s*. to 7*s*. per dozen.

SECT. VIII.—BEES.

IT were greatly to be wished, that this useful and industrious insect was more generally propagated than it is at present. Two or three hives are occasionally seen in a farmer's garden, and sometimes in that of a cottager, but they are by no means frequent. As honey is a luxury, and wax a necessary of life, both of which are obtained by means of this insect, without any expense or labour of man, and from what would otherwise be totally lost, it appears to be an object deserving the attention of the Board of Agriculture, of the Agricultural Societies in different parts of the kingdom, and of those illustrious benefactors to their country, the Duke of Bedford, Lord Somerville, Mr.

Coke, &c. to promote by premiums, and otherwise, the increase of this valuable insect.

The hives in common use here are composed of straw twisted together into ropes, and bound by slips of the bark of the bramble. They are made with perpendicular sides and a semi-globular top, and are capable of containing about a bushel of corn. In these hives the bees are obliged to be destroyed in order to obtain the honey, and this is a principal cause of their scarcity. To obviate this inconvenience, a large stock of bees, sometimes amounting to sixteen or eighteen hives, has been kept for many years past in the sort of hive shown in pl. viii. fig. 1. with complete success. The hive or "hoop," is made of unthrashed rye-straw, with the heads cut off, which being of great length, and unbroken by the flail, forms their smoothest and best residence. Each hoop is ten inches high, and fourteen inches wide within, and in making them care must be taken that the sides shall be perfectly upright, and each of exactly the same dimensions, so that when they are placed upon each other they may fit close and stand firm.

The covers, fig. 2. are likewise made of straw, large enough to extend an inch beyond the circumference of the hoop, and as flat as possible, to hinder the bees from working above the wooden top, which is farther prevented by a sheet of paper being placed between them. The wooden top, fig. 3, must be fixed upon the top of each hoop, before it is used, by two long nails; that part of it which has the openings for the knives being placed toward the back of the hive; and as soon as the first hoop is filled with honey, or the bees want room, another must be set upon it, taking care to put in the knives, fig. 4, before the straw-cover is

Pl. VII

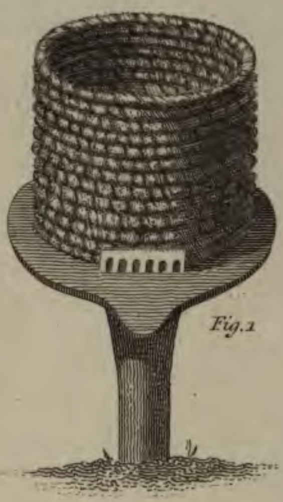
Fig. 1

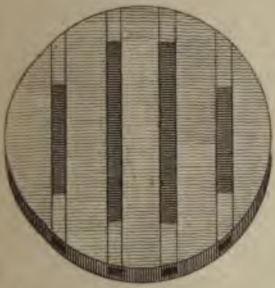
Fig. 3

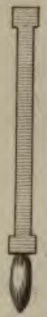
Fig. 4

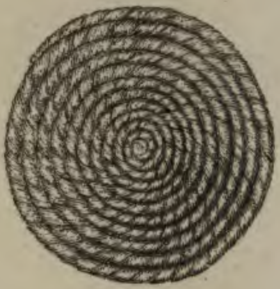
Fig. 2

Fig. 5

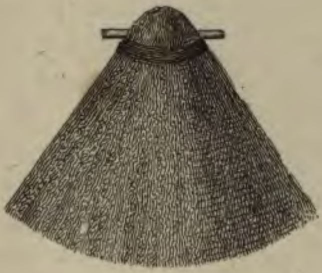
Fig. 7

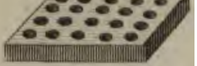
Fig. 6

is taken off, and again removing them when the hoop is fixed.

On every additional hoop being placed upon the hive, the moveable resting-board, fig. 5, must be fixed in such a manner as to admit the bees to enter commodiously at all the doors.

When the honey is to be taken, the bottom hoop must be taken first, observing, however, to leave the bees in a full hoop in the autumn, for their food in bad weather in the winter. By this method from thirty to forty lbs. of honey have been taken from a hive in one season, and the bees preserved strong and healthy to produce another swarm, and a like quantity of honey the following summer. As, however, by this management less honey is left for the winter's subsistence of the bees than by the ordinary method, it is necessary to feed them with coarse brown sugar dissolved in beer to nearly the consistence of treacle, which must be given to them regularly every morning in the feeder, fig. 6. This is a piece of oak, with holes bored in it half an inch deep, and half an inch in diameter, placed on a raised stand near the hives, with a wooden cover to keep out the rain. The feeding must commence about the middle or latter end of September, as soon as the honey-bearing flowers are over, in order to preserve the honey left in the hives for bad weather in winter, when the bees cannot come forth, and must be continued until the honey is again produced in the flowers. The expense of feeding through the winter will not exceed 3*s*. per hive.

The hood, fig. 7, is a bundle of straw tied firmly together at one end; it is then inverted, and the long ends falling over the tied part, a small iron or wooden hoop is put upon it, and kept in it's place by a stick thrust through the knot; the summit is then covered with a little mortar, which gives it weight, and at the same time excludes the wet.

It is customary here to place the bee-hives upon flat stones, resting on the ground: this is a very bad practice, for in winter the stone is considerably colder than wood; and in summer, by absorbing the rays of the sun, it becomes so hot as greatly to incommode the bees, and cause them to hang out of the hive in great numbers. The stands should always be of wood, with one support under the centre, and raised about two feet from the ground, by which the access of mice and other vermin to the hives will be prevented.

CHAPTER XIV.

RURAL ECONOMY.

SECT. I.—LABOUR.

Mr. LEATHAM, in his original Survey of the East-Riding, p. 32, written in 1794, says, "The "foremen and shepherds have from 14*l.* to 18*l.* with "victuals, lodging, and washing; a common man-"servant has from 10*l.* to 13*l.*; women and boys, "from 3*l.* to 8*l.*; day-labourers, when supplied with "victuals, earn from Martinmas to Candlemas, 4*s.* to "5*s.* per week; from Candlemas to Midsummer, 5*s.* or "6*s.*; from Midsummer to Michaelmas, 8*s.* or 9*s.*; "from Michaelmas to Martinmas, 5*s.* or 6*s.* If they "find their own victuals, the wages from Michaelmas "to Candlemas vary from 9*s.* to 10*s.*; between Can-"dlemas and Midsummer, from 10*s.* to 11*s.*; and from "Midsummer to Michaelmas, from 14*s.* to 16*s.* Wo-"men receive from 6*d.* to 8*d.* for weeding, and 8*d.* to "1*s.* for hay-making: in harvest, they receive from "1*s.* to 1*s.* 6*d.* without victuals.

"Threshing wheat varies from 2*s.* 2*d.* to 3*s.* 4*d.* per "quarter; barley, from 1*s.* 6*d.* to 2*s.*; oats, from 8*d.*

"to 1*s.*; beans, from 1*s.* 3*d.* to 1*s.* 6*d.* Reaping "wheat varies from 6*s.* to 8*s.* per acre; oats and barley, from 4*s.* to 7*s.*; beans, from 5*s.* to 7*s.* Paring "and burning, from 20*s.* to 30*s.* per acre."

The prices of labour in the East-Riding are at present (1811) exorbitantly high, having in many cases been doubled, and in some advanced in a still greater proportion since the date of the preceding statement; they are as follow:

AGRICULTURAL LABOUR.

Yearly Servants, with board, washing, and lodging.

Foreman, from 28*l.* to 35*l.*
Second man, from 20*l.* to 26*l.*
Shepherd, from 18*l.* to 26*l.*
Plough-boy, 14 or 16 years old, from 14*l.* to 17*l.*
Housekeeper, from 12*l.* to 16*l.*
Under-girl, dairy-maid, &c. from 9*l.* to 12*l.*

Day-labourers, with board.

From Martinmas to Candlemas, per week, 9*s.*—10*s.*
From Candlemas to Lady-day, per week, 10*s.*—12*s.*
From Lady-day to Midsummer, per week, 12*s.*—15*s.*
From Midsummer to Martinmas, per week, 14*s.*—18*s.*
For a month in harvest, per week, 16*s.* to 24*s.*
To women for a month in harvest, per week, from 10*s.* to 15*s.*

Day-

Day-labourers, without board.

From Martinmas to Candlemas, per day, about 2*s*. 6*d*.
Thence to Midsummer, from 3*s*. to 3*s*. 6*d*.
From Midsummer until harvest, 3*s*. 6*d*. to 4*s*.
For a month in harvest, from 4*s*. to 5*s*.
Thence till Martinmas, 3*s*.
To women for weeding, per day, 9*d*.
For hay-making, per day, from 1*s*. to 1*s*. 4*d*.
For burning sods, per day, from 1*s*. 6*d*. to 1*s*. 8*d*.
For a month in harvest, per day, 2*s*. to 3*s*.

Labour, by the piece.

Thrashing wheat, per quarter, with board, from 4*s*. to 4*s*. 6*d*.
Without board, from 5*s*. 6*d*. to 7*s*.
Thrashing oats, per quarter, with board, from 9*d*. to 10*d*.
Without board, from 1*s*. 4*d*. to 1*s*. 6*d*.
Mowing, stooking, and swathe-raking corn, per acre, 7*s*. to 9*s*.
Reaping and stooking wheat, 10*s*. to 11*s*. 6*d*.
Reaping, stooking, and raking beans, per acre, 8*s*.—10*s*.
Mowing grass, per acre, 3*s*. to 4*s*.
Clover or Saintfoin, from 1*s*. 8*d*. to 2*s*. 2*d*.
Under-draining, per rood, 8*d*. to 1*s*. 6*d*.
Hoeing turneps twice, per acre, 10*s*. to 15*s*.
Paring clean swarth, per acre, 17*s*. to 20*s*.
Burning ditto, per acre, from 8*s*. to 12*s*.
Spreading the ashes, from 1*s*. 8*d*. to 2*s*. 2*d*.
Stubbing whins, per acre, where the ground is completely covered, 50*s*. to 60*s*.
Casting soil, per cubic yard, 2*d*. to 4*d*.

MECHANICAL LABOUR.

Wheelwright.

Wages, per day, without board, from 3*s.* to 4*s.*
With board, from 2*s.* 6*d.* to 2*s.* 9*d.*

Bricklayer.

Walling brick in breadth wall, per rood of 49 square feet, from 2*s.* 9*d.* to 3*s.*
Brick in length wall, from 4*s.* 6*d.* to 5*s.*
Brick and half wall, from 6*s.* to 6*s.* 9*d.*
Wall of two bricks thick, 7*s.* to 8*s.*
Wages per day, without board, 3*s.* 6*d.* to 4*s.*
Rough chalk-stone walling, 18 inches thick, per rood, 9*s.*

The population in most parts of the East-Riding being very thin, and there being also a great want of habitations for the labourers, the principal part of the agricultural labour is performed by yearly servants kept in the farmer's house. These work early and late, and are at all hours at the call of their master; but the day-labourers work from light to dark in winter, and from six to six in summer, excepting during harvest, when they work two or three hours later, and frequently, when employed in carrying the corn, in fine weather and moonlight nights through great part of the night, beginning later in the morning when the corn is damp with dew: half an hour is allowed for breakfast, and one hour for dinner, at all times of the year. The labourers indeed, with few exceptions, are industrious, hard-working men, and notwithstanding the very high wages, may possibly be as cheap as those of some other counties, where much lower prices are paid.

The food of farming servants and labourers is invariably milk for breakfast and supper, with cold meat or fruit-pies, or cheesecakes; and for dinner hot meat-pie or boiled meat and dumpling, with small beer. No ale is given except during harvest, or occasionally as a reward for any extra or severe labour; nor is beer given, except to those who are boarded in the house.

The labourers, who supply food for themselves and their families, live also comfortably in general compared with those of many of the southern counties. Their bread comprehends the whole of the wheat, except the coarse bran, and is home-made; this they eat with butter, or bacon and potatoes, and they have commonly one meal in the day of fresh meat, or meat-pie. Barley-cake, or a mixture of barley and wheat, is sometimes adopted when wheat is very dear; this is a wholesome, nutritive, and not unpleasant food. Those, who can keep a cow, derive from it a considerable share of the support of themselves and families, and live much better than such as are unfortunately compelled to be contented with the washings of the tea-pot, rendered palatable by treacle, and perhaps a little gin.

The yearly servants complete their annual engagement on the 23d November (old Martinmas-day) when they are allowed a week to visit their relatives before they go to their new, or return to their former services. They are hired at Statutes, here called "Sittings," held at the market-towns and principal villages on different days, for three or four weeks before

fore the expiration of their year, and claim a right to go from one to another until they are hired, thus wasting their master's time, and becoming so unsteady and unsettled that they are of little use for the remaining period of their engagement. Much caballing, likewise, is carried on among them upon these occasions, for the advance of wages, &c. which tends considerably to augment their rate. The magistrates, who have the power of fixing the time and place of these hirings, by ordering them to be held at a short space of time (seven days for instance) before the expiration of the year, might in a great measure remedy the above inconveniences.

SECT. II.—PROVISIONS, &c.

It is impossible to estimate, with strict precision, the prices of provisions, as they vary much with the quality of the article, and also with the temporary or local demand for some particular article; as nearly, however, as they could be ascertained about Midsummer 1811, they were as under in the following markets of the Riding:

	Wheat, per bushel.	Oats, per bushel.	Barley, per bushel.	Beans, per bushel.	Beef, per st. of 14lbs.	Mutton, per stone.	Veal, per stone.	Bacon, per stone.	New-milk cheese, per stone	Butter, per firkin.	Ditto, per lb. of 18oz. in summer.	New-milk, per quart.	Fish, per lb.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d. s. d.	s. d.	s. d.
Bridlington	9 6	2 9	3 6	—	9 0	9 4	10 0	8 6	11 0	—	0 9 to 1 1	—	0 3
Driffield	9 4	2 7	3 9	5 0	9 0	9 4	10 6	10 0	—	60 0	—	0 2	—
Beverley	9 6	2 9	—	4 9	8 9	9 4	10 6	—	—	—	1 3	—	—
Hull	9 6	2 9	—	4 9	8 9	9 4	10 6	—	—	—	1 3	—	—
Hedon	9 3	2 10	—	4 10	8 9	9 4	10 6	—	—	—	1 0	—	—
Pattrington	9 3	2 10	—	4 10	8 9	9 4	10 6	—	—	—	1 0	—	—

The bushel above alluded to is the customary bushel of the East-Riding, which exceeds the Winchester by about one quart, and in some few instances rather more.

Wool of the large Holderness sheep is selling at about 9½*d.* per lb., and that of the Wolds sheep, which is somewhat shorter and finer, at about 10*d.* to 11*d.* per lb. Hides are worth 4*s.* per stone of 14lbs., and tallow about 6*s.* per stone.

Mr. Leatham, in his primary Report, p. 32, states, " the average prices of meat, fish, and butter by the " pound, of milk by the quart, and of grain by the " bushel, in February 1794, to be as under, viz.:

	s.	*d.*
" Beef, per lb.	0	3¼
" Mutton and Pork,	0	4
" Veal,	0	4½
" Fish,	0	3¼
" Butter, per lb. of 18 oz.	1	0
" Milk, at Hull, per quart,	0	3
" Wheat, per bushel,	5	9
" Barley,	4	1½
" Oats,	2	6
" Beans,	4	6

" The bushel in the East is less than in the North-" west part of the Riding."

On a comparison of the foregoing statement, it will be seen that labour, together with rent and taxation taken collectively, have at least doubled, while the prices of produce have in many cases hardly doubled, in others remain the same, and in some have actually decreased since the year 1794. If means, therefore, are not adopted to relieve the farmers, either by lowering their taxes and the prices of labour (by building cottages,) or by increasing the value of their produce (by destroying monopolies, and giving them an open market,) they will shortly be found unable to answer the demands made upon them. It is also obvious, that the advance in the profits of Agriculture has by no means kept pace with the advance in its expenses, and that farmers had a better prospect of realizing a competence seventeen years ago than they have at present.

SECT. III.—FUEL.

THIS Riding, as noticed in the former pages of the volume, produces no coal within itself, and very little wood for fuel; it is, therefore, dependent upon importation for nearly the whole of what it consumes. The vicinity of the coast is supplied with coal of excellent quality from Newcastle and Sunderland, at about 11*d.* per bushel. The remainder of the Riding is supplied by means of its navigable waters, and supplementary land-carriage, with coal from the West-Riding, which, although less valuable and less durable than the Newcastle coal, is nevertheless excellent fuel, and compensates it's inferiority by it's cheapness, being sold in the vicinity of the Humber and the Ouse at about 8*d.* per bushel; at Driffield the price is enhanced by lock-dues, &c. about 1*d.* per bushel.

CHAPTER XV.

POLITICAL ECONOMY,

As connected with or affecting Agriculture.

SECT. I.—ROADS.

NEARLY the whole of the roads in the East-Riding are entirely maintained by the townships through which they pass, there not being more than about 140 miles of turnpike-road in the whole Riding, and very little being repaired by individual or local prescription.

In the open state of the country, which existed till within a few late years, the roads were chiefly of grass, and had little attention paid to them; wheel-carriages also were then much less used than at present, the corn being chiefly carried to market on the backs of horses. But on the introduction of inclosures, these roads were contracted within narrower bounds, and heavy carriage-work being increased upon them, it became requisite to adopt some plan for rendering them more durable. For this purpose, various means have been used, and different widths between the fences have been tried, which have, of course, produced different results.

The surface of the Wolds being every where undulating, and lying on a firm, dry, and porous substratum, seems peculiarly favourable to the formation of roads; but notwithstanding these circumstances, they are in general throughout the district excessively bad, and in all cases *the materials bear the blame.* Those materials, it is true, are less durable than the materials of some other districts, but on examination it may perhaps be found that they are not applied in the most advantageous manner.

In many of the early inclosures, sixty feet in width were set out between the ditches, in the middle of which space the road was formed and covered to the width of about twenty, leaving an equal space on each side encumbered with banks and bushes, or sunk into pits for procuring materials. This having been found to produce an excessive and useless waste of land, has generally in more recent cases been abandoned, and the space reduced to forty, and in some cases to thirty feet, still, however, retaining the same breadth of travellable road, viz. from eighteen to twenty-one feet; and the remainder continuing not merely useless to the public, but injurious also, in the first instance, by the loss of land, and ever afterward by the nuisances it produces by encouraging vagrants to form their encampments, and by inducing the inhabitants to make deposits of manure, timber, and rubbish, as well as to depasture them with their horses and cattle, to the inevitable destruction of the fences, and the frequent annoyance of the adjoining inclosures.

The whole of these inconveniences, it would appear, might be remedied by very simple means, viz. regulating the width between the fences, by the quantity of travelling which the road has to sustain, and other circumstances, and then, *forming the whole width so set out into firm road.* Under this system few roads, except those immediately leading to large towns, would require to be more than thirty feet in width, for some even less would suffice: from these thirty feet, in some cases, five might be taken off for a foot-path, in others five might be added; but in every principal road a foot-path of that width ought to accompany the carriage-road for the accommodation and security of foot-passengers. The increased expense of making roads upon this principle would be amply repaid by the saving of land in the first instance, and by the subsequent saving of repairs, which the additional width of travellable road would effect.

The next point for consideration is, *the formation of the road*, which has been performed in several different methods. Roads made twenty years ago were usually formed very narrow, and raised considerably above the general surface of the adjoining land, so as to render it nearly impossible for carriages to draw off them, and even dangerous for them to pass each other. In later years they have been formed by cutting down the sides, and casting the earth into the middle. This is an improvement on the former method, although, when the stones are laid on, they are frequently barrelled so much in the centre, as to oblige carriages to travel invariably in the same track. A third method has been, to cast the soil outward from the road, which requires the sides to be sunk deeper than in the former instances, and by raising a mound on each side, subjects the road to be drifted up with snow, as well as prevents carriages from quitting it upon any occasion. The above modes, therefore, appear to be all liable to objections; and it might be better, perhaps, after merely levelling the surface by removing inequalities and bringing both sides of the road to an equal height, to give it it's due convexity, by laying on the materials thicker toward the centre, and reducing them gradually to nothing on each side.

The nature and application of the materials comes next to be considered. The chalk being, from the softness of it's texture, easily reducible to mud by wet, frost, and friction, requires some harder materials to form a firm surface upon it; this might, in most parts of the Wolds, be supplied from thin strata of flint, which present themselves in the greater part of the quarries, and in some places may be gathered from the surface. These are, at present, generally laid on with the chalk; and are frequently buried unbroken beneath it, where, by producing an inequality of hardness, they occasion holes in the road, which retain water, and ultimately effect it's destruction; whereas, if carefully selected, broken very small, and uniformly spread upon the surface of the chalk, they would unite with it, and form an even and durable road. But small sea-gravel, where it can be procured, spread thin upon chalk, is superior to all other materials, producing a firmness, equality, and durability of surface which can be found in no other combination. This is frequently carried several miles into the country, and wherever it is applied, the roads immediately become good, and soon repay the expense.

All these inconveniences and defects of system in the forming and repairing of roads, are occasionally enhanced by the evils arising from the inattention, want of skill, or other motives of the Commissioners of Inclosures in laying out their directions. In the open state of the country, the traveller had the choice of the whole surface, and of course the roads usually lay in the most convenient and least circuitous lines, in most cases requiring only to be preserved and improved, to render it the easiest for travelling of any *hilly district* in the kingdom, instead of being, as it now is in many places, almost impassable for wheels at any season of the year.

But it could scarcely be otherwise, when Commissioners were frequently appointed to execute inclosures from distant parts of the kingdom; men, totally unacquainted with the circumstances of the country, and who probably never saw the place to be inclosed more than once, viz. when they were making their valuation, or others appointed with more local information indeed, but too often inattentive to the convenience or advantage of any one, except those immediately interested in the inclosure. Their meetings also sometimes being held at places distant from the township under inclosure, they were unable to inspect the nature of the ground over which the roads were to pass. They therefore drew straight lines between given points upon the map, under the idea of making them the shortest, and at the same time (with a view of saving present expense) they made the fewest roads possible.

Thus did they at once commit several mistakes; for this straight line frequently passing over unfavourable ground, caused additional expense in the first formation of the road, the length and difficulties of which to the traveller were sometimes greatly increased by lying at right angles to hills or across valleys; and by diminishing their number, the whole roads of the township are necessarily rendered more circuitous, consequently more expensive to keep in repair, from the damage they sustain by many persons being compelled to go the greater distance, who might otherwise only have occasion to go a short one.

Other Commissioners, acting on principles more justifiable indeed, yet not less injurious, have openly avowed, that it is their business to look only to the advantage of their employers, and that they have nothing to do with the public; that it is unsightly to make crooked fences by the side of winding roads; that it is inconvenient to make roads diverge at acute angles, because the interposed fields would occasionally be rendered less commodious for cultivation; and that, if the public be thereby injured, it has the means of redress in its own hands, as an appeal lies against their acts, and if no such appeal is made, they have a right to suppose that what they have done is at least not disapproved of. But universal experience proves, *that what is every one's business is no one's business*, such appeal, consequently, is rarely made; otherwise we should not be at this time annoyed by so many instances of roads unskilfully projected, and unwarrantably lengthened, in almost every direction.

In Holderness, the roads are repaired with gravel alone spread upon the clay, with which in dry weather it firmly unites, so that during summer few countries can boast of finer roads than the greater part of that district. But in wet weather the clay, retaining water and becoming softened by it, allows the gravel to be cut through and broken up.

In Howdenshire, the worst circumstanced in respect to materials for making roads of any part of the East-Riding, the greatest exertions have been made, and enormous expense incurred, in bringing gravel by means of water-conveyance from Spurn-point, and afterwards, in many cases, conveying it to a considerable distance by land. By these means the principal roads are kept in much better condition than could be expected, notwithstanding the district labours under a similar disadvantage with Holderness, in wanting a firm foundation to lay the gravel upon.

In the other parts of the Riding, not already noticed, the roads are variously good or bad, according to the varying nature and quality of the materials with which they are repaired, or the varying attention that is shown in their repairs; but in general throughout the Riding little attention is paid to breaking the materials sufficiently small before they are applied to the roads, or to letting off the water and scraping the mud from them, all essential operations in making new roads and afterward keeping them in repair.

Great neglect prevails in many parts of the Riding, in the placing and keeping in repair of direction-posts. This is productive of much inconvenience to strangers, sometimes even to the endangering of their lives; but an excellent regulation has recently been adopted in one Division of the Riding, at the recommendation of the Magistrates, which is that of placing the name of each town and village in a conspicuous situation at it's two extremities, with the distance to the next principal place in that direction. This would be still more beneficial, if the name of each township were inscribed on a post by the road-side at each of it's boundaries, as the traveller would then be enabled to ascertain whom he ought to thank for a good and commodious road, or whom to blame for a bad one. It would also be particularly useful to the magistrates, who would thereby be enabled to discover which townships were attentive to their roads, and which were negligent of them, and would enable them to bestow with due effect their praise or their reproof. It might likewise be serviceable in numerous other instances.

It may not be improper in this place to remark, that the compulsory clause in the general Inclosure Act for fencing off *both sides of all roads*, frequently creates a very large and unnecessary expense; for many roads, though in themselves indispensable, are so rarely used, as to produce no inconvenience to the occupier of the lands through which they pass; the application of this clause, therefore, might in many instances be advantageously left to the discretion of the Commissioners.

The exemption from toll enjoyed by mail-coaches, is an instance of injustice which calls loudly for redress. While the proprietors of those vehicles are reaping exorbitant profit, the public great accommodation, and government a prodigious revenue, many townships are oppressed by the labour which they are compelled to perform upon the roads they traverse, and still farther in some instances by excessive assessments upon indictments[n].

The general Turnpike and Highway Acts, 13th Geo. III. require to be revised and amended, particularly where they relate to statute labour. This is the most injudicious and expensive mode of repairing the public highways which could be adopted. The surveyors appointed under the act are commonly ignorant of the principles on which roads should be formed, and therefore frequently misapply the materials, and being compulsorily appointed, unwillingly give up their time and attention to the business. The day of statute duty is considered by the labourers as a holiday, and by the farmer as a day lost; the first therefore loiter about the stone-pit, or saunter away their eight hours with as little labour as possible; and the latter is always backward and unwilling to give up the time and labour of his men and horses from the work of his farm, to what he considers an unprofitable employment. Thus double the time and money is ineffectually expended upon the repairs of roads, which, under a better system, would be required for keeping them in the most perfect state.

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[n] In one instance a turnpike-road in this Riding was repaired, in consequence of an indictment, at an expense of 800*l.* per mile, an expense ruinous to the townships concerned, without effecting any ultimate improvement of the road in question, as from the nature of the country and of the materials, the funds at the disposal of the Commissioners are unequal to the repairs, although the tolls are already so high as not to admit of any farther increase. Is it then reasonable that, under such circumstances, a mail-coach should be allowed to pass free?—H. S.

If, instead of statute labour, the real value of that labour were to be paid into the hands of some active, intelligent man, appointed as surveyor by the inhabitants and the magistrates, with a salary proportioned to the amount of the value of the whole statute labour of the township, and annually re-appointed so long as his conduct was approved of, the farmers would be relieved from the inconvenience of giving up the use of their teams when it may be very inconvenient to them, as well as their own time and attention when in office, and the roads would be put into a better state of repair and at considerably less expense to the townships. In corrobation of this opinion, Mr. Leatham in his Report, p. 17, observes, "although the law furnishes "means of supplying the deficiency of supporting "roads, when the statute-work fails, yet when we consider how ill that work is executed, the additional "assessment ceases to be a matter of surprise. The "farmer's servant considers this as a holiday;—the "stone-pit will not admit all the carriages to load at "the same time, of course many lose their time by "waiting;—frequently no surveyor attends to direct "the work or keep order; and if he does attend, he is "either unskilful, wants authority, or does not sufficiently interest himself in the cause to perform his "duty."

SECT. II.—CANALS.

THIS subject having been treated of in Chapter I. Sect. VI., little remains to be farther said upon it. It has been observed, that the East-Riding is nearly surrounded by waters naturally navigable; and to these considerable addition has been made by the formation of several inland navigations, so that nearly every market-town possesses the great advantage of a communication with the metropolis, and the rest of the kingdom, by water carriage.

The benefits arising from canals to the community at large, and to the individual proprietors of estates and occupiers of lands through which they pass, are numerous and great; they are not, however, unattended by inconveniences. Among these one of the first is, the consumption of land which they occasion, (in many cases from thirteen to fifteen acres and upward in a mile, independently of the injury done to the adjoining lands by the escape of water through the banks,) and which is so much irrecoverably abstracted from the production of the food of man.

The depredations and injuries committed by the men and horses, which traverse them, is another source of inconvenience, and not an inconsiderable one; this chiefly falls upon the occupier, and for it no remuneration is provided.

To induce land-owners to submit with patience to these and other unpleasant circumstances attendant on canals, the prospect of making them operate as drainages has not unfrequently been held out to them; but this, however plausible in theory, has generally been found fallacious in practice, and should therefore be received with extreme caution. The two operations, indeed, are in themselves incompatible, as the object of one is to retain the water to a certain height, (frequently on a level above the natural surface of the land,) and of the other by every practicable means to facilitate it's escape.

SECT. III. AND IV.—FAIRS AND MARKETS.

THE subjoined catalogue of fairs and weekly markets is extracted from different authentic printed lists, and corrected up to the present time from the most accurate information that can be obtained.

Towns.

Towns.	Market Days.	Fair Days.
Aldbrough.		4th September.
Beverley.	Wednesday and Saturday.	Thursday before the 26th February.—Holy Thursday.—5th July, 5th November, markets for fat cattle.—Wednesday before 6th or on the 6th April.—Wednesday before the 13th or on the 13th May.—Wednesday before the 14th or on the 14th September.—Wednesday after the 25th December.
Brandesburton.		15th May, for horses, cattle and sheep.
Bridlington.	Saturday.	Monday before Whitsunday, for horned cattle, woollen-cloth, and toys.—21st October, for the same.
Hedon.	Saturday.	14th February ("Candlemas Fair").—2d August ("Maudlin or Magdalen Fair").—26th September ("Holy Rood Fair").—17th November, for fat and lean cattle, tin, leather, and toys. A market for the sale of fat cattle every alternate Monday throughout the year.
Hornsea.	*Saturday.*	12th August.—17th December.—Fat and lean cattle and horses.

Towns.	*Market Days.*	*Fair Days.*
Howden.	Saturday.	Second Tuesday after the 11th January.—Tuesday before the 5th April.—Second Tuesday after the 11th July.—2d October.—This last is a great fair for horses of all descriptions, and, as well as the others, for cattle and flax.
Hull.	Tuesday and Saturday.	11th October, for horses, particularly foals, toys, and small wares.
Hunmanby.	*Tuesday.*	6th May.—29th October.—Cattle, sheep, and toys.
Kilham,	*Thursday.*	21st August.—12th November (All Saints fair).—Cattle, sheep, and inferior horses; the last for foals.
Little Driffield.		Easter-Monday.—Whit-Monday.—26th August.—19th September.—Large fairs for cattle, sheep, inferior horses, and leather.
North Duffield.		4th May, for cattle and sheep.
North Frodingham.	*Thursday.*	10th July.—2d October.—Toys and pedlars' goods.
Pattrington.	Saturday.	28th March.—18th July.—6th December.—Woollen-cloth, hats, and toys.

Towns.	*Market Days.*	*Fair Days.*
Pocklington.	Saturday.	7th March, (if Leap-year, on 6th March, "St. Matthew's fair").—6th May, ("St. Mark's fair").—5th August, ("St. James's fair").—8th November, ("St. Simon and St. Jude's fair").—Large fairs for sheep, also for cattle, cheese, cloth, and leather. Seven days before St. Matthew, and seven days before Christmas day, are shows for horses, and a weekly market for the sale of fat calves in the early part of the summer.
South Cave.	Monday.	Trinity-Monday, for horses and sheep.
Stamford-bridge.		1st December.—Horses, cattle, sheep, hardware, and woollen-cloth. A large fair for Scotch cattle.
Weighton.	Wednesday.	14th May, 25th September, for cattle, horses, and sheep. The latter is the largest and most valuable sheep-fair in the north of England, there being frequently from 70,000 to 80,000 large and nearly fat sheep upon the ground.

SECT. V.—COMMERCE.

THE East-Riding, enjoying so largely the benefits of internal and external navigation, may naturally be expected to participate extensively in the advantages of it. Hull stands fourth in the scale of mercantile sea-ports in England; the Humber is, in most winds, a secure road-stead and safe anchorage for vessels of any burthen, and the two beautiful and capacious wet-docks are capable of containing a great number of vessels. Many vessels sail annually from this port to the Baltic, and to America and the West Indies; and about thirty are employed in the Greenland fisheries, which are generally very successful, besides numerous general traders. During peace the carrying trade employs many of it's vessels, and the transport service in time of war: Many likewise are engaged as coasters in conveying chiefly coals and corn, and numerous small craft traverse the inland navigations of the West-Riding and the interior of the kingdom.

The trade of the sea-port of Bridlington is principally confined to coasting vessels employed in the conveyance of coals and corn to London, whence they generally return in ballast; though a few of it's vessels are engaged in the carrying and transport-service. A considerable quantity of grain, chiefly barley and wheat, is sent from Bridlington for the supply of the collieries in the north, and some to other places.

From Driffield, Pattrington, Market-Weighton, and several villages along the course of the Humber, the Ouse, and the Derwent, large quantities of corn are sent to the markets of the West-Riding, in return for which are brought coals, lime, flag-stones, bricks, and tiles, timber, and sundry other articles. From York, Malton, and Scarborough likewise, though lying beyond the confines of the East-Riding, a great proportion of it's superfluous produce is sent out.

From a weekly return of the imports of corn into the London markets, it appears that from the 6th of April, 1810, to the 6th of April, 1811, the following number of quarters of corn were exported thither from Hull, Bridlington, and Scarborough, viz.

	Wheat.	Oats.	Barley	Malt.	Peas and Beans.
Hull	843	152,572	1193	195	382
Bridlington	20	53,743	74	54	107
Scarborough		23,595	56		
	863	229,910	1323	249	489

To the latter place, probably, about one-half is supplied by the North-Riding; but as a small quantity is shipped for London from other parts of the East-Riding, the above aggregate return will afford a pretty fair estimate of the supply derived from this district by the metropolis.

By a return of the trade of Hedon with the West-Riding for the year 1805, it appears that it exported of wheat about 3000 quarters, beans 1500 quarters, oats 2000 quarters; most of the oats produced in that vicinity being sent to Hull by land-carriage for the London market. It imported of coals 2500, and of lime 3000 chaldrons. About 3000 chaldrons of lime are also landed annually at Pattrington Haven from the West-Riding, for the supply of that neighbourhood.

A large quantity of hams and bacon are annually exported from this Riding to the metropolis, and other populous districts of the kingdom.

SECT. VI.—MANUFACTURES.

THE surface of this Riding is little calculated for manufactures of any kind, having neither coal, nor wood for charcoal within itself, nor any rapid streams for working machinery: the following, however, are the chief of what it contains.

At Hull are white lead-works, a glue-manufactory, an iron-foundry, a glass-house, several oil-mills, manufactories of cordage and sail-cloth, the patent whalebone-manufactory, several extensive export brick and tile-works, a pottery for coarse articles, ship-building to a large extent, and most of the minor trades, professions, and handicrafts, naturally attached to a large commercial town.

At Hessel is an extensive manufactory for preparing whiting, or Spanish-white, from chalk, and for making white-lead.

At Howden is a manufactory for working up the roughest out-dressings of flax into a kind of canvas for nail-bags and other coarse packages.

Near Driffield is a large manufactory for spinning and weaving tow into a coarse kind of linen for wrappers, packing-cloths, &c.; and at Wansford, about three miles from Driffield, is a considerable establishment for spinning and weaving cotton, for the manufacture of Scotch carpeting, for dyeing, and bleaching.

ing. From the small demand of late for all cotton goods, however, that business has greatly declined, and many families which had emigrated from distant counties have been sent home again; but all the latter-mentioned trades are carried on to a considerable extent, and a great quantity of coarse wool is worked up in the carpet business.

On Walling-Fen, near Howden, great quantities of white bricks are made of a blue clay found there, which are exported thence in various directions; being in great demand for superior buildings on account of their beauty of colour, accuracy of form, and durability. Bricks and tiles are made in great numbers also for sale near York, at Bridlington, at Norton near Malton, and some other places, but on the Wolds-district, where most wanted, no clay for the purpose is to be met with.

Some tanners and curriers are established in different parts of the Riding; but not more than are necessary to prepare the skins produced in their respective neighbourhood, as little bark is produced in the Riding, except in the small Hundred of Ouse and Derwent.

At Fulford, near York, is a glass-house for making flint glass, and a white lead-work, chiefly employed upon the lead produced in the mines of the West-Riding. This for exportation to any place must be brought down the Ouse, upon which river the work is situated.

At Bridlington a few small ships are annually built, and some likewise repaired.

The domestic manufacture of coarse gray woollen-cloths, from a mixture of black and white wool, for the clothing of the farmer and his family, which was formerly not unusual, has now long ceased; but the careful housewife still spins and knits the stockings for her family of black or mixed wool, (most farmers keeping one or two black sheep for the purpose,) and likewise during winter spins flax for a web of linen for sheets or shirts.

To this scanty list of the produce of man's hands in this Riding nothing more can be added; and there is nothing on the whole, except the mill at Wansford, which can properly come under the description of manufactories. Fortunately for this district, it is as nearly as possible exempt from manufactories, and consequently from the vices, the corruption of manners, and poverty that are attendant upon them: it may indeed be looked upon as almost purely agricultural; perhaps there is not another in the kingdom of equal extent more completely of that description.

SECT. VII.—POOR.

MUCH has already been said, regarding the peasantry of the East-Riding in Chap. III. sect. 3, Chap. IV. sect. 4, and Chap. XIV. sect. 1, of this Survey; some points, however, still remain unnoticed.

The high rate of wages stated in the last chapter, proves that the labouring class must either be rich or wasteful. Among the yearly servants, who are almost universally unmarried people, a passion for finery prevails so extensively, that notwithstanding their exorbitant wages, the whole is commonly anticipated before the end of the year, and not unfrequently a considerable debt remains undischarged, very few laying by any thing for their future establishment in life, or the assistance of their aged parents. A large sum is thus annually drawn from the pockets of the farmers, and ultimately from those of their landlords, to be squandered among tailors and shopkeepers; which, if carefully reserved for the day of need, or usefully applied to relieve the wants of indigent relatives, would prevent many worthy families from becoming burthensome to their parishes, *and in the contemplation of such an application would be cheerfully paid by their employers.*

The married labourers live with a degree of comfort unknown in many other counties; so much so, indeed, as to have lost in some measure the principal stimulus to industry; for by their great exertions when they do work, and their consequent great earnings, they are enabled to lay by as much during summer as will keep them through the winter, and many choose to pass that season in idleness or mischief, rather than labour for the more moderate wages which can then be afforded.

The want of habitations for the labourers is the most prominent cause of this evil, and the necessity, therefore, of an immediate increase of them in this Riding cannot be too frequently or too emphatically impressed upon the minds of the landed proprietors. The greater part have gardens attached to their cottages for the growth of vegetables, and are able to feed annually a bacon hog; some have land allotted to them for keeping a cow, and their bread is generally of wheat, and home-made. The scarcity of the year 1801 compelled many to apply to their parishes for relief, and the noble spirit of independence once mastered, less compunction has subsequently been felt to applications of a similar nature. *The price of wheat and butchers' meat* is the test for demanding parish-relief, and

Those poor, who are maintained entirely by their parishes, are usually provided with small houses, and supply themselves with provisions from their weekly pay, there being but few regular work-houses in the Riding.

Several friendly-societies, or benefit-clubs, have been established in the East-Riding, for many late years. These excellent institutions should have every encouragement which the legislature and the country can give them, as they are the means of practically inculcating a spirit of economy among the lower classes, afford temporary assistance to them in sickness, and furnish them with a comfortable provision in irrecoverable infirmity and old age; accompanied in every instance with the pleasing reflection, that for this assistance and these comforts they are indebted to their own savings in earlier and healthier life, without being under obligation to any external benefactor.

SECT. VIII.—POPULATION.

THERE are no circumstances in the population of the East-Riding which are likely to affect it's progress differently from what may be expected in any other agricultural part of the kingdom. If it's increase be general there, it would be the same here, and the reverse: not fluctuating, as in manufacturing districts, that progress will gradually improve with the improving cultivation of the country, which by it's more operose and complicated character requires more hands to carry it on. In the course of the last half-century a prodigious number of inclosures have taken place, and many thousands of acres, previously in a state of waste, brought under the plough; these, together with the improved system of agriculture, have caused an increased demand for labourers, which however, as may be inferred from the peculiarly high price of labour in this Riding, has been inadequately supplied.

For the purpose of this Survey, the town and liberties of Beverley, and the town and county of the town of Kingston-upon-Hull, are considered as parts of the East-Riding, and will therefore considerably increase the sum total of it's population, though they do not appear to affect it's general agricultural character beyond their immediate vicinity.

According to the returns made to Parliament under the Population-act, 41 G. III. in 1801, it appears that the population of each Wapontake was as follows:

Wapontake.	Division.	Males.	Females.
Buckrose	. . . .	4018	3617
Dickering	. . . .	6156	5951
Harthill	Bainton Beacon . .	2765	2565
	Holme Beacon . .	3431	3168
	Hunsley Beacon . .	3814	3756
	Wilton Beacon . .	2556	2404
Holderness	North Division . .	2850	2600
	Middle Division . .	3888	3756
	South Division . .	2423	2428
Howdenshire	. . . .	2749	2787
Ouse and Derwent	. . . .	3092	3112
		37742	36144
Town & County of Kingston-upon-Hull		13051	16465
Town and Liberties of Beverley . .		2734	3267
		53527	55876

In the above table some things worthy of attention require to be pointed out, showing the different effects which the country and a town produce upon population, and how the course of nature is affected by an unnatural course of life.

It will appear that in the sum total of the population of this Riding, the females exceed the males by 2349, whereas (it being generally understood, that the male-births exceed the female by about one in twenty-five) out of 109403, the whole population of the East-Riding, there ought to be an excess of males to about the amount of 4376; there is therefore a deficiency of males of 6735*.

But if the returns of the eleven Districts be examined, it will be found, that there is an uniform excess of males in the eight first, amounting to 1661 out of 57295, instead of 2291, and an excess in the whole eleven of 1598, instead of 2955 out of 73886, a deficiency of nearly one half of the due excess; whereas in the first eight there is only a deficiency of 630 from the due excess; and when it is considered that this calculation is taken of persons of all ages, and not at the period of birth only, (which, to be perfectly correct, it ought to be, as the excess would then be greatest,) it proves strongly the due and natural state of their population. The three last of the eleven are affected by their locality, so as to have a small excess of females; the south Division of Holderness being influenced by the vicinity of Hull; Howdenshire by an excess of females to the amount of 132 in the town of Howden; and Ouse and Derwent by coming in contact with the city of York.

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* The births may indeed exceed in that proportion, but not the existing population at any given moment—as those who humbly presume to assign final causes for the allotments of Providence, conceive that the excess of male-births may be intended to counteract the greater consumption of male-life from the hardships of war and other exertions to which males are exposed—to say nothing of what has by some been asserted respecting the greater fragility of male-constitutions. This, if true, affects the whole reasoning of the preceding page.—F. W.

These are strong circumstances in favour of an agricultural country, and furnish data for many useful conclusions for the encouragement of population, if the political maxim be well-founded—that the strength of a nation depends upon the number and physical character of it's inhabitants.

At some former period many parishes in the East-Riding, and particularly upon the Wolds, have far exceeded their present population, as traces exist, proving numerous villages to have been much more extensive than they are at present. In many instances, indeed, populous townships appear to have been reduced to one or two farm-houses, and in some are totally obliterated. When this depopulation took place, cannot now be ascertained; neither history nor the existing parish-registers, as far as an opportunity of investigating them has been afforded, throw any light upon the subject. It may therefore have happened during the wars of the houses of York and Lancaster, or at a still earlier period from the incursions of foreign invaders on a maritime district; or it may have been the effect of some unrecorded epidemic, or of famine, at a period when epidemics and famine made more frequent and destructive inroads on European population than have been experienced in later ages.

Of some few villages the inhabitants have been thinned in late years by an injudicious principle of destroying cottages, or suffering them to fall to decay as not paying an adequate rent, or as subjecting the parishes occasionally to increased burthens. It may be hoped, however, that this error is now becoming apparent, and the loss will in that case be speedily replaced.

From the answers returned by the clergy to the questions respecting births, burials, and marriages, in the East-Riding, it appears that in

Wapontake.	Division.	1700		1754	Aver. of 1796, 7, 8, 9, 1800.		
		Births.	Burials.	Marriages.	Births.	Burials.	Marriages.
Buckrose		123	95	28	232	140	54
Dickering		262	179	71	358	228	101
Harthill	Bainton Beacon	148	50	19	95	60	22
	Holme Beacon	113	68	29	137	74	32
	Hunsley Beacon	136	104	29	310	306	152
	Wilton Beacon	68	57	19	90	64	27
Holderness	North Division	139	99	22	165	103	42
	Middle Division	176	123	33	291	203	68
	South Division	161	86	35	195	101	39
Howdenshire		149	124	45	198	133	43
Ouse and Derwent		107	95	31	143	85	43
Kingston-upon-Hull		61	57	41	225	202	82
Beverley		121	96	41	196	129	70
		1764	1233	443	2635	1828	775
General Increase					$\frac{2}{4}$	$\frac{2}{4}$	$\frac{3}{4}$
Exclusive of Hull, Beverley, and Hunsley Beacon		1446	976	332	1904	1189	471
Partial increase					$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{3}$
Hull, Beverley, and Hunsley Beacon		318	257	111	731	639	304
Increase of Hull, &c.					$\frac{5}{4}$	$\frac{6}{4}$	$\frac{8}{4}$

Though the early extracts from the parish-registers are, on several accounts, not altogether to be relied upon, still their accuracy is sufficient to prove the foregoing to be a very curious table, as it shows a great increase of general population ; but still more curious, as it proves the different effects which a commercial town, or towns in general, and a country purely agricultural, have upon population.

The average of the last five years of the return, it appears, exceeds the return of births and burials for the year 1700, and of marriages for the year 1754 (being the first year after the passing of the Marriage-Act) throughout the whole East-Riding in births and burials by one-half, in marriages by three-fourths ; but if we exclude Beverley, Hull, and the Division of Hunsley Beacon (as affected by it's vicinity to Hull and Beverley), the increase in the agricultural part of the Riding will be in marriages and births one-third, but in burials one-fourth ; and of Beverley, Hull, and Hunsley Beacon separately considered, the increase of births appears to be 1¼, and of burials 1½, while the marriages are nearly triple in number.

Thus, although in the country the births and marriages have increased only by one-third, the burials have increased by less than one-fourth; while in the towns, though the births increase as 2¼ to one, and the marriages nearly as three to one, yet the burials have increased as 2½ to one.

Here it is to be considered, that in the returns from the country, the burials of most of the people born in it are probably included, the emigration (as may be inferred from the nearly due proportion of the sexes) not being considerable, or being in nearly an equal proportion of males and females. This renders the conclusions relating to the progress of population in the country more precise than any which can be obtained respecting the towns; in which the vast loss arising from foreign emigration, and the extinction of seamen and others in foreign countries, are to be taken into account—losses, in a great measure accounting for the undue proportion of the sexes. A considerable influx of population likewise takes place in towns; otherwise from the great excess of deaths above births in towns, and of births above deaths in the country, the latter would appear infinitely more favourable to population. In that case, were both fairly left to the natural course of things, they would exchange characters—the inhabitants of towns would continually diminish in number, and the country slowly but constantly increase in population.

It may here be noticed, that the Parliamentary returns (as published) are less accurate than they might have been, from various errors in the casting up of the horizontal as well as vertical figures, &c. An original copy of one in the possession of the Surveyor, which he knows to be correct, runs thus—Inhabited houses 13, families 13, males 30, females 36, agriculture 58, trades 3, gentry 5, total 66: the printed return of which is—houses 13, families 13, males 30, females 36, agriculture 8, trades 3, others 55, total 66—fifty, through the inattention of the transcriber, have been taken from agriculture, and added to the gentry.

Much inaccuracy likewise pervaded the whole of the returns, from the deficiency of the instructions to the parish-officers with respect to the division of the classes. In some instances the farmer only, or the labourer employed in agriculture, or the mechanic (being the master of the family) was returned in their respective classes, in which cases their wives, families, and children were returned in the last class. In other instances, the wives, &c. were returned along with the master of the family, agreeably (it may be presumed) to the intention of the legislature, as by him they would undoubtedly be maintained. These two classes therefore, it is probable, are considerably under-rated, and the last class equally over-rated, and the sum total alone to be relied upon for it's accuracy.

CHAPTER XVI.

OBSTACLES TO IMPROVEMENT,

Including general Observations on Agricultural Legislation and Police.

VARIOUS are the obstacles which impede and interrupt the progress of agricultural improvement: of which a considerable portion are of a general nature, and affect the kingdom at large; others are peculiar to the district under survey. Of these some may be removed by the farmers themselves, some rest with the landlords; but the greater and more important part are attributable to the Government, and can only be remedied by Legislative interference.

1. In this inauspicious list, TITHE IN KIND presents itself foremost; but fortunately for the East-Riding this obstruction is rapidly disappearing, being now almost exclusively confined to the few remaining open-field townships. Tithe in kind, is a tithe not merely of the produce of the earth, but of industry, of labour, and of capital. A farmer purchases, at a small price, a tract of barren land, the tithe of which is worth little, perhaps nothing; he expends a large sum of money, and bestows a great deal of time and skill in improving it, and it is possible that the tithe taken from his first crop may be equal to the prime cost of the land!—Is this reasonable, is it just?

2. THE WANT OF A FREE AND OPEN MARKET FOR THE SALE OF AGRICULTURAL PRODUCE, is another prominent obstacle to improvement, and one of the leading

causes of the irregular and often inadequate supply of human food, which this kingdom so frequently experiences. By stopping the exportation of corn, and continually interfering in it's importation through the medium of bounties and licences, by opening and closing the distilleries, as well as by direct taxation, Government produces those sudden fluctuations in the prices of grain which tend so greatly to embarrass the operations and estimates of the farmers, that they have not a certainty for six months' continuance to enable them to judge what crops or what proportion of each sort of grain should be sown to keep the markets regularly supplied. In this part of the kingdom, some kinds of grain have advanced more than cent. per cent. in the short space of ten months: in May 1811, barley was selling at 28*s*. per quarter, at present (March 1812) it is worth 66*s*. and upward; and oats, which were last year from 18*s*. to 21*s*. are now worth 50*s*.; and this not from any monopoly or hoarding up, to which such great advances are often falsely imputed, but from an actual deficiency of those species of grain, occasioned in part undoubtedly by the lowness of last year's prices, which held out no encouragement to the farmer.

If one-third of the money expended in bounties to our merchants, or sent in exchange for grain to recruit the ranks of our inveterate foe, were applied to the encouragement of agriculture at home; if corn were suffered to pass and repass freely through our ports as the demand required, and the brewers and distillers were allowed the uncontrolled use of it subject to a moderate duty, the prices would be more reasonable and less variable, the farmers would be encouraged to produce the greatest quantity of grain, the markets would be regularly supplied, and *Great Britain would probably never again have cause to dread a scarcity*[p].

3. THE EXCESSIVE AMOUNT OF THE FEES AND CHARGES ATTENDANT ON THE PASSING OF INCLOSURE AND OTHER BILLS FOR AGRICULTURAL IMPROVEMENT is a great drawback upon their benefits; in some cases intercepting their adoption, and in all, consuming a large capital, which might have been usefully employed in carrying them into effect.

4. To these may be added the enormous TAX ON SALT, equal (it is believed) to about four thousand per cent. on the prime cost at the pits, by which the use of it is precluded in every case where it is not absolutely indispensable.

5. The heavy TAX ON BRICKS falls with peculiar severity on the chief part of this Riding, as it produces no stone which can effectually be used as a substitute; and throughout the Wolds district, which produces no clay for making them, their price is aggravated by long land-carriage.

6. The WANT OF ADEQUATE CAPITAL in tenants tends greatly to impede the introduction of improved modes

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[p] The greater part of the produce of the soil cannot go to an open market: it is closed to the *occupier* of the soil against his corn, his rapeseed, and other seeds; his malt, his cattle, and provisions; his wool, and rabbit-down, of the two last of which so much is produced in this Riding: to the *owner* of the soil against his timber, his bark, and other articles; and this on legislative and political principles now generally exploded, though still sustained by the predominance of the trading over the landed interest. The pretext is, to favour the consumer and manufacturer by keeping articles of primary necessity low in price; the effect is, to keep all in a state of continual fluctuation of price and quantity, and consequently deeply to injure both.—W. S.

of management; and poverty is frequently the lot of a farmer thus circumstanced, who upon a smaller concern would be able to earn a competence. The farmers in this Riding labour under this want of judgment in common with their brethren in most other parts of the kingdom[q].

7. INCONSISTENT AND INJURIOUS COVENANTS too frequently occur in leases and agreements, by which occupiers are tied down to unprofitable modes of management, or compelled to sow their land in an improper state; these interfere greatly with the progress of improvement.

8. The scarcity of home-grown TIMBER for common purposes, and the high duty paid upon timber imported from the Baltic, prevent the execution of many useful works.

9. The variety of VERMIN which hourly destroy the property of the farmer, rooks, sparrows, rats, mice, moles, &c. though of little moment separately considered,

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[q] The want of capital is one of the greatest obstacles to improvement both in landlord and tenant. All improvements of a permanent nature are best executed by the landlord; but a poor one cannot attempt them; and few tenants, however opulent, will. Another impediment to improvement, is the occupation of too great an extent of land of an ordinary quality; a practice frequent in this Riding. A man renting 500*l.* per annum in land worth 30*s.* per acre, may daily overlook the whole, and yearly cultivate the whole; whereas he, who pays only as much rent for six times the quantity, cannot do either. The present excessive price of labour in this district is, also, a great check upon improvement; under the present circumstances no laborious or expensive system of cultivation can be prudently attempted: that improvement will be found the most advantageous, which is attended with the least disbursement; and that cultivation the most profitable, which produces moderate crops with little labour.—W. S.

dered, are collectively a great drawback upon the farmer's profits, and consequently obstruct the adoption of sundry beneficial undertakings.

To meet the above, and other obstructions of minor import with countervailing remedies, would be well worth the attention both of public bodies, and of individuals interested in the welfare of their country. The increasing population of Great Britain has been a subject of exultation with some statesmen; but whether the theory be in itself right or wrong, it behoves such men to promote a parallel advance in the supply of human food, otherwise the increase would be a misfortune, instead of a benefit; and to render this supply certain, it must be the produce of our own soil, and perfectly independent of foreign assistance.

CHAP.

CHAPTER XVII.

MISCELLANEOUS OBSERVATIONS.

SECT. I.—AGRICULTURAL SOCIETIES.

A SOCIETY supported by subscriptions, has existed at Driffield for several years, for giving premiums for the improvement of the breed of horned-cattle, sheep, and swine, and distributes from 60*l.* to 80*l.* annually, under the direction of a Committee appointed for the purpose.

A Society for discussing Agricultural topics, and purchasing new and useful Agricultural books and implements, holds it's meetings four times in the year at Hedon. The members of this Society are chosen by ballot, and a President, Committee, and Officers, are annually elected from the members in general; the Committee proposes the subject of discussion, corresponds with other Societies for the diffusion of useful knowledge, and arranges the general business of the Society. Through the means of this highly respectable Society, much information has been communicated to the neighbourhood, and minutes of their discussions, and every interesting particular, are regularly entered in their records, thus affording an interesting reference on most Agricultural subjects.

A Society likewise for encouraging the improvement of the breed of horned-cattle, sheep, and swine, meets twice in the year at Malton; of which as many of it's members reside in the East-Riding, some notice may properly be taken in this place. This Society is in some degree of a private nature, the premiums being exclusively confined to the members; it has nevertheless produced a spirit of emulation, and bids fair to effect a great improvement in the live-stock of the neighbourhood, particularly in the horned-cattle, which most required it.

Premiums also are given at Howden for the improvement of the breed of horses; and a public Society for promoting the improvement of horses and cattle existed at York, but has now for several years been discontinued.

As the promotion of Agriculture, in the increasing state of the population of Great-Britain, is an object of primary importance, all means professing to have this for their object are entitled to encouragement and support; and Societies of the above descriptions may certainly be so considered, *when conducted on liberal and impartial principles.*

SECT. II.—WEIGHTS AND MEASURES.

THE great variations in weights and measures throughout this Riding, are productive of numerous inconveniences, and unhappily afford but too frequent opportunities of fraud.

The customary bushel used in this Riding is considerably larger than the Winchester, and the corn-merchants invariably buy by the former, and sell by the latter!—By 22 and 23 C. II. c. 12. it is enacted, that whoever shall buy or sell any corn or salt by any other than the Winchester measure of eight gallons, and that without shaking the bushel by the buyer, shall forfeit the sum of 40*s*. and all the corn so bought or sold, or the value thereof.

It is most desirable, that a law so unexceptionably good should be strictly carried into execution. With this view the Magistrates have frequently recommended the adoption of the principle, and the growers of corn have held meetings, and at such meetings resolved to sell by the legal measure only; but the corn-merchants have either got the better at the time, or have gradually and silently recurred to the old practice; and the public have ultimately given way, either because it was unpleasant to an individual to carry the laws into execution against the purchasers of his corn, or because the purchasers have made an outcry against them in the market for selling by a bushel less than the customary, though they themselves always did it.

The remedy however is plain and easy.—By the 35 G. III. c. 102, and 37 G. III. c. 143, the Justices were required to appoint persons to examine the weights and balances in their respective districts. This has had the desired effect; at first many deficiences were discovered, many weights and balances were destroyed, and many people who used them brought to punishment and shame. At present there is reason to believe, that little deficiency exists in the weights, and there is seldom occasion to inspect them. The same would take place with the measures of capacity; let the Magistrates provide standard measures as well as weights, and the bushel will soon be brought to uniformity; for the standard bushel is as accurately defined as the weights—it is to be *with a plain bottom, eighteen and a half inches wide throughout, and eight inches deep.*

A few years since an action was brought at the Assizes at York against the Assignees of a Bankrupt, who felt themselves required to refuse the dividend of his effects to persons who had sold him corn by other than the Winchester measure, and the Plaintiffs could not support the action. The executors of a corn-dealer, also, have refused to pay for corn as illegally purchased: but notwithstanding such *legal* frauds (if they may be so called) and others of a similar description, have been pretty generally known, still the corn-growers continue to sell by the customary bushel; not considering to what penalties and losses they render themselves liable, and (what is of much greater consequence) not reflecting that they thus voluntarily give away the whole crop of their farms every tenth or fifteenth year, accordingly as their bushels may more or less exceed the size of the Winchester bushel, without any return whatever, *as they procure for their bushel of corn no greater price in the market, than he who wisely sells his grain by the legal measure.*

In the Malton market, where much corn from the East-Riding is sold, it is customary to sell oats by weight, 24 stone of 14 lbs. being considered equal to a quarter of eight customary bushels. This, also, is illegal; as by 31 G. III. c. 30, it is enacted, that where corn shall be sold by weight, 57 lbs. avoirdupois of wheat, 55 lbs. of rye, 49 lbs. of barley, 42 lbs. of beer or bigg, and 38 lbs. of oats, shall be deemed equal to one Winchester bushel.

The coal-measure varies at almost every port on the coast between Newcastle and London, gradually diminishing as it proceeds southward, and the price remaining nearly the same. At Bridlington it is represented as containing 48 upheaped Winchester bushels in the chaldron; but it is believed that it would not, if actually measured, amount to nearly that quantity. The legal measure, upon which the duty is paid, is 36 upheaped Winchester bushels per chaldron.

On the Wolds, and throughout the greater part of the Riding, wool is sold by the stone of 16¼ lbs. In Holderness, the todd of 28½ lbs. is in general use.

Butchers'-meat and provisions of most kinds, hides, tallow, and many other articles of that description, are sold by the stone of 14 lbs.

The pound of fresh butter varies in the different markets and baskets, from 16 to 20 ounces; when salted, it is sold by the firkin, containing fifty-six pounds.

Hay is sold by the ton of one hundred and sixty stone of 14 lbs. each; and straw by the "threave" of twelve bundles, but of no specific weight.

CONCLUSION.

MEANS OF IMPROVEMENT,

And measures calculated for that purpose.

THE means of Agricultural improvement, which first present themselves, are chiefly to be found in the removal of the obstacles to it; others, however, may still be suggested, to prevent the too great pressure of population upon produce.

Under-draining.—Much land is suffered to remain comparatively useless, in consequence of the subsoil being saturated with a redundancy of water. By under-draining, the whole would immediately become productive to at least double it's present amount.

Potatoes.—An extended cultivation of this truly valuable esculent will at all times prove a ready resource, and should therefore be not merely permitted, but promoted by landlords, as in years of plenty the superfluous quantity would be applied to increase the supply of animal food, and in the event of unfavourable harvests, would be ever at hand to aid the deficiency of grain.

But the largest and last resource for supplying the wants of an increasing population, and which is yet almost untried, is the system of stall-feeding, or constantly keeping in the house or farm-yard all the live-stock of the farm, the sheep excepted: this will effect a saving of full three-fifths of the land upon which they feed, which may consequently be applied to the production of corn. The experiment has been carried on for several years on an extensive scale, and in the most efficient and successful manner, by a very excellent man now no more, the late Henry Maister, Esq. of Winestead; a gentleman who, during a life lately terminated (spring 1812) in it's eighty-second year, had no wish but to promote the welfare and happiness of mankind; who, in the course of that extended period, had accomplished his wish as fully as falls to the power or lot of any individual, and to whom the agriculturist in particular is under the greatest obligations. His practice would have been given at length in a former part of these pages, but from his unassuming and diffident character, he could never be prevailed upon to draw out a detail of it, although his accounts were kept with the greatest accuracy.

A practice common in Northumberland would be attended with beneficial effects, if generally adopted: it is that of giving a short written character to farming servants on leaving their services, merely stating with whom they have lived, the nature and length of their servitude, and how they have conducted themselves. This would be a great stimulus to good behaviour and activity, and would operate as a considerable check to misconduct. At present a farming servant, however ill he may have behaved, goes to a hiring, and obtains a new situation without any such inquiry being made.

APPENDIX.

A GREAT quantity of crystals of *Gypsum selenites* and *prismaticum*, have lately been discovered imbedded in blue clay on the hill side opposite to the mansion-house at Knapton. They are very transparent, of great regularity of form, and of all sizes, from a quarter of an inch to five or six inches in length and of corresponding dimensions. The *selenites* are in rhomboids of ten sides, the *prismaticum* of six sides, and frequently in clusters.—No gypsum was previously known to exist in that neighbourhood.

The last returns of the population of the East-Riding of the County of York, taken on the 27th May, 1811, having just reached the Surveyor from authentic sources, are here given at large, as they are on several accounts extremely interesting, and confirm, in a great degree, the conclusions drawn from the former returns, Chapter XV. Sect. 8. They are as follow:

AN ACCOUNT OF

THE POPULATION OF THE EAST-RIDING OF THE COUNTY OF YORK,

Taken May 27th, 1811.

SOUTH HOLDERNESS.

Townships.	Houses.				Occupations.			Persons, including children of all ages.		
	Inhabited.	Number of Families.	Building.	Emtpy.	Farmers, &c.	Traders, &c.	Others not in 2 last classes.	Males.	Females.	Total No. of Persons.
Burtswick	63	72		1	59	7	6	180	180	360
Easington	83	83		1	22	16	45	195	194	389
Frodingham South	9	9			9			41	27	68
Halsham	52	52			17	8	27	135	141	276
Holmpton	40	41		1	33	6	2	105	109	214
Hollym	39	43	1	2	39	3	1	115	114	229
Kayingham	98	105		1	85	20		277	273	550
Kilnsea	26	28			20	2	6	63	59	122
Ottringham	107	110	1		84	24	2	251	271	522
Out Newton	9	9			9			32	27	59
Owthorne	19	22		1	17	5		41	33	74
Pattrington	190	224			124	69	31	502	514	1016
Paul	88	106		2	34	62	10	315	259	574
Rimswell	21	24			24			50	57	107
Ryhill and Camerton	45	49		1	43	6		133	131	264
Skeffling	28	25	1		12	2	11	78	81	159
Sunk Island	21	24			24			120	89	209
Thorngumbald ...	40	45			38	6	1	107	108	215
Welwick	73	73		3	55	14	4	201	171	372
Winestead	17	17			14		3	59	46	105
Withernsea	16	23			21	2		53	51	104
Total	1084	1184	3	13	783	252	149	3053	2935	5988

MIDDLE HOLDERNESS.

Townships.	Houses.				Occupations.			Persons, including children of all ages.		
	Inhabited.	Number of Families.	Building.	Empty.	Farmers, &c.	Traders, &c.	Others not in 2 last classes.	Males.	Females.	Total No. of Persons.
Aldbrough	132	150	1	1	85	26	39	348	339	687
Benningholme ...	13	13			13			48	37	85
Bewick, East Newton, &c.	6	7		1	6		1	24	15	39
Bilton	17	17			15	1	1	59	42	101
Burton Pidsea ...	52	59		2	54	4	1	151	148	299
Coniston	25	25			13	9	3	56	56	112
Danthorpe	9	10			8	1	1	23	24	47
Drypool	190	217		4	5	179	33	382	436	818
Ellerby	36	40			34	2		107	81	188
Elstronwick	22	26		2	15	2	9	61	58	119
Fitling	24	25			24	1		65	64	129
Flinton	21	21			19	2		64	47	111
Ganstead	7	10			9	1		33	30	63
Garton and Grimston	19	20	1		18	2		62	61	123
Hedon	163	179		3	31	109	39	374	406	780
Hilston	6	6			5	1		22	18	40
Humbleton	16	16			14	2	2	61	50	111
Lelley	18	25			21	4		64	59	123
Marfleet	24	24			22	2		56	65	121
Marton	21	22		1	19	3		64	55	119
Meaux	11	11		2	10	1		33	30	63
Owstwick	18	18		1	17	1		50	56	106
Preston	128	169	1	3	122	44	3	400	399	799
Roos	90	93		5	67	21	5	218	206	424
Southcoates	138	157	2	2	41	45	71	277	366	643
South Skirlaugh	44	44			9	8	27	74	86	160
Sproatley	59	59	1		18	14	36	121	146	267
Sutton	605	699	4	26	63	149	487	1432	1633	3065
Swine	39	42			32	3	7	99	103	202
Thirtleby	10	10			10			26	28	54
Tunstall	23	25			23	2		67	66	133
Wawne	38	38			35	3		132	118	250
Waxholme	12	12			12			34	26	60
West Newton ...	32	33			21	3	9	78	69	147
Wyton	12	14		2	13	1		43	41	84
Total	2080	2338	10	55	923	646	771	5208	5464	10672

NORTH HOLDERNESS.

Townships.	Houses.				Occupations.			Persons, including children of all ages.		
	Inhabited.	Number of Families.	Building.	Empty.	Farmers, &c.	Traders, &c.	Others not in 2 last classes.	Males.	Females.	Total No. of Persons.
Arnold and N. Skirlaugh	29	31			24	7		95	97	192
Atwick, Arram, and Skirlington	58	58		4	53	5		141	145	286
Barmston	33	39		1	30	3	6	114	92	206
Beeford	110	116			68	24	24	282	242	524
Bewholme and Nunkeeling	33	36			31	4	1	98	100	198
Bonwick	4	4			4			13	16	29
Brandesburton	102	106		1	66	26	14	242	267	509
Catfoss	8	8			7		1	30	27	57
Catwick	27	27			24	2	1	74	67	141
Cowdens	24	24			24			63	50	113
Dringhoe, Upton, and Brough	27	29			22	5	2	80	78	158
Dunnington	10	11			11			28	21	49
Eske	2	2			2			15	11	26
Frodingham North	111	117			79	26	12	239	245	484
Goxhill	8	12			8	4		35	33	68
Hatfield Magna	20	25			23	2		66	64	130
Hatfield Parva ...	4	4			4			20	10	30
Hempholme	11	12			9	1	2	45	29	74
Hornsea	147	174	3	9	71	51	52	323	381	704
Leven	113	120	1		87	29	4	304	270	574
Lissett	15	15			9	5	1	51	43	94
Mappleton and Rowlston	32	32			26	6		94	97	191
Moor Town	4	4			4			24	16	40
Rise	29	29			21	4	4	106	97	203
Riston	68	71			54	8	9	173	155	328
Routh	18	20			19	1		69	59	128
Sigglesthorne	26	28			24	3	1	77	58	135
Skipsea	55	61		2	45	7	9	144	146	290
Ulram	27	28			22	3	3	85	81	166
Wassand & Seaton	38	48		1	40	6	2	104	111	215
Wethernsea	62	82			61	22		180	176	356
Total	1255	1374	4	18	972	254	148	3414	3284	6698

HOWDENSHIRE.

	Houses.				Occupations.			Persons, including children of all ages.		
Townships.	Inhabited.	Number of Families.	Building.	Empty.	Farmers, &c.	Traders, &c.	Others not in 2 last classes.	Males.	Females.	Total No. of Persons.
Asselby	48	58		2	38	11	9	127	120	247
Balkholme	22	22			22			44	45	89
Barmby Marsh ...	99	108		3	63	32	13	233	243	476
Belby	8	10			10			19	19	38
Bellasize	34	37			34	3		104	101	205
Blacktoft	35	50			43	7		123	118	241
Caville and Portington	12	16			13		3	57	61	118
Cotness	7	7		1	7			16	10	26
Eastrington	71	86			72	12	2	162	190	352
Ellerker	35	40		1	36	4		101	108	209
Gilberdike	77	105		1	87	18		233	231	464
Howden	314	409	1	14	116	230	63	830	982	1812
Kilpin	49	49		3	25	24		118	125	243
Knedlington	20	22		1	18	4		55	43	98
Laxton	42	54			37	14	3	135	136	271
Melton	24	24			15	1	8	57	61	118
Metham	5	5			5			26	15	41
Newport	52	52		4	7	45		117	102	219
Saltmarsh	27	38		2	32	5	1	72	96	168
Scalby and Cheapsides ...	37	37			35	2		72	75	147
Skelton	26	29		1	28	1		78	88	166
Thorpe	10	10			10			24	28	52
Walkington	56	56			45	10	1	132	101	233
Welton	114	120	2	1	52	37	31	251	265	516
Yokefleet	33	33			31	2		81	80	161
Total	1257	1477	3	34	881	462	134	3267	3443	6710

HUNSLEY BEACON.

Townships.	Houses.				Occupations.			Persons, including children of all ages.		
	Inhabited.	Number of Families.	Building.	Empty.	Farmers, &c.	Traders, &c.	Others not in 2 last classes.	Males.	Females.	Total No. of Persons.
Bishop Burton ...	99	106		1	69	17	20	260	255	515
Bromfleet	29	30			8	3	19	73	91	164
Cherry Burton ...	71	73			57	10	6	196	162	358
Cottingham	492	508	3	19	312	108	88	1074	1225	2299
Elloughton, and Brough	70	87		3	75	7	5	203	187	390
Elton	64	64		1	49	7	8	168	170	338
Everthorpe, and Drewton	24	25		1	17	5	3	69	82	151
Faxfleet	24	28			26	2		94	86	180
Hotham............	63	65			9	14		146	149	295
Leckenfield	56	59			271	16	3	163	127	290
New Village	22	24			5	19		70	71	141
North Cave	155	160	2	9	81	33	46	307	358	665
North Cliff	14	16		1	16			51	48	99
Rowley	63	72		2	65	7	2	203	167	370
Sancton and Houghton ...	50	59		1	45	10	4	146	151	297
Seulcoates	1748	2073	11	97	2	1631	440	3760	4885	8645
Skidby	50	62		1	212	35	40	150	137	287
South Cave	170	177		5	116	43	18	366	352	718
South Cliff	19	19			19			64	62	126
South Dalton	42	50		4	38	9	3	121	104	225
Thorpe Brantingham, and Brantingham	33	33	1	2	29	2	2	67	65	132
Waldby	6	8			8			26	24	50
Walkington	43	43	1		34	8	1	107	110	217
Total...........	3407	3811	18	147	1563	1986	708	7884	9068	16952

BAINTON BEACON.

	Houses.				Occupations.			Persons, including children of all ages.		
Townships.	Inhabited.	Number of Familes.	Building.	Empty.	Farmers, &c.	Traders, &c.	Others not in 2 last classes.	Males.	Females.	Total No. of Persons.
Aike	14	14			13	1		44	40	84
Bainton	46	47	1		35	6	6	132	105	237
Beswick	30	32		1	23	5	4	84	70	154
Brackon	4	4			4			15	7	22
Driffield Great	399	420	5	7	124	190	106	890	967	1857
Driffield Little	17	19			11	2	6	42	40	82
Eastbourn	1	1			1			9	7	16
Emswell	14	14			14			52	34	86
Holme	23	25			21	3	1	69	53	122
Hutton Cranswick	177	180		1	130	36	14	368	380	748
Kilnwick	44	47		1	27	11	9	111	92	203
Kirkburn	23	25			12	13		63	52	115
Lockington	85	94		3	69	13	12	218	211	429
Lund	55	71	1	1	48	11	12	165	162	327
Middleton	62	72	1	1	65	7		211	195	406
Neswick	8	9			8		1	35	27	62
North Dalton	56	71			58	13		165	161	326
Rotsea	2	2			2			9	9	18
Scorbrough	13	13			13			46	40	86
Skerne	36	39		9	34	5		94	100	194
Southburn	17	17			17			48	39	87
Sunderlandwick	5	5			4		1	18	9	27
Tibthorpe	26	20		1	25	1		105	63	168
Warter	54	61			19	9	33	234	167	401
Watton	38	41			28	4	9	143	103	246
Total	1249	1343	8	25	805	330	214	3370	3133	6503

HOLME BEACON.

Townships.	Houses.				Occupations.			Persons, including children of all ages.		
	Inhabited.	Number of Families.	Building.	Empty.	Farmers, &c.	Traders, &c.	Others not in 2 last classes.	Males.	Females.	Total No. of Persons.
Aughton	30	44		1	40	4		121	126	247
Bielby	34	37		2	36	1		95	93	188
Breighton	31	31	1		30	1		74	72	146
Bubwith	77	110		1	75	35		247	230	477
East Cottingwith	49	63			59	4		142	150	292
Ellerton	52	59		2	47	12		147	124	271
Everingham	35	40			34	5	1	131	126	257
Foggathorpe	15	15			12	3		52	48	100
Goodmanham ...	34	36		1	34	2		107	93	200
Gribthorpe and Willitoft	23	27			27			66	66	132
Harlthorpe	16	17			16	1		45	29	74
Harswell	10	10			10			38	22	60
Hayton	29	29			20	8	1	69	83	152
Holme	217	231	2		188	33	10	576	589	1165
Laytham	17	19		1	19			58	46	104
Londesbrough ...	25	47			25	3	19	104	111	215
Market Weighton	324	324		3	58	125	141	779	729	1508
Melbourne	70	70	1		55	13	2	171	170	341
Seaton Ross	89	99			78	21		212	183	395
Shipton	76	81		3	58	16	7	172	184	356
Spaldington	43	59	1	1	52	7		168	163	331
Storwood	19	19	1		18	1		48	44	92
Thorpe-le-Street	2	2			2			8	8	16
Wressle, Loftsome, Newsham, & Brind	74	74	2	2	69	5		201	165	366
Total	1391	1543	8	17	1062	300	181	3831	3654	7485

WILTON BEACON.

	Houses.				Occupations.			Persons, including children of all ages		
Townships.	Inhabited.	Number of Families.	Building.	Empty.	Farmers, &c.	Traders, &c.	Others not in 2 last classes.	Males.	Females.	Total No. of Persons.
Allerthorpe	26	26			24	1	1	63	69	132
Bishop Wilton, and Belthorpe	81	102		1	86	15	1	230	224	454
Bolton	18	19	1		18		1	45	49	94
Burnby	20	20			16	2	2	49	64	113
Fangfoss	29	30			26	2	2	69	76	145
Full Sutton	23	23		1	18	2	3	59	67	126
Givendale	8	11		1	11			30	31	61
Grimthorpe	2	2			1	1		14	9	23
High Catton	32	34			25	3	6	88	93	181
Huggate	57	61			52	7	2	203	159	362
Kilnwick Percy ...	6	6		1	5		1	27	33	60
Low Catton	29	29		1	21	2	6	70	75	145
Meltonby	11	11			11			37	42	79
Millington	37	48			40	7	1	108	97	205
Newton-upon-Derwent	41	42	1	1	33	4	5	111	98	209
Nunburnholme ...	23	26			24	2		83	69	152
Owsthorpe	2	2			1	1		6	6	12
Pocklington	381	393		15	153	193	47	718	821	1539
Stamford-bridge ..	33	37		1	16	21		88	100	188
Sutton-upon-Derwent ...	42	54		6	31	10	13	152	140	292
Thornton	42	42			37	5		115	86	201
Waplington	3	3			3			8	6	14
Wilberfoss	60	70		2	41	23	6	157	159	316
Yapham	23	23			16	4	3	62	60	122
Youlthorpe	19	19			18	1		55	69	124
Total	1048	1133	2	30	727	306	100	2647	2702	5349

OUSE AND DERWENT.

	Houses.				Occupations.			Persons, including children of all ages.		
Townships.	Inhabited.	Number of Families.	Building.	Empty.	Farmers, &c.	Traders, &c.	Others not in 2 last classes.	Males.	Females.	Total No. of Persons.
Barlby	62	68	1	2	40	9	19	139	124	263
Brackenholme	11	12		1	12			43	36	79
Cliff with Lund...	80	102		1	88	14		228	231	459
Deighton	26	28			26	1	1	70	98	168
Duffield North ...	54	74	1	2	55	11	8	188	158	346
Duffield South ...	27	37		1	36	1		86	91	177
Elvington	41	52	1		34	13	5	154	157	311
Escrick	73	79			56	9	14	216	198	414
Gate-Fulford	104	110		4	44	29	37	259	308	567
Grimston	10	10			10			36	27	63
Hemingbrough ...	81	99			75	18	6	207	222	429
St. Lawrence, in Heslington	52	55		2	46	5	4	141	145	286
Kelfield	33	44	3		33	10	1	104	105	209
Kexby	23	23			23			80	65	145
Menthorpe with Bowthorpe	9	9			8	1		28	25	53
Naburn	69	70		1	56	10	4	174	172	346
Oxgodby	32	32			30	2		71	87	158
Riccall	127	132		3	82	24	26	252	266	518
Scoreby	19	23			13	10		71	72	143
Skipwith	52	54		3	38	6	10	127	123	250
Stillingfleet, with Moreby	59	63		1	55	5	3	169	159	328
Thorganby, with Cottingwith	58	71	1	2	27	10	34	216	187	403
Water-Fulford ...	5	5			4		1	18	16	34
Wheldrake	97	110		2	73	24	13	287	294	581
Total	1204	1362	7	25	964	212	186	3364	3366	6730

DICKERING.

Townships.	Houses.				Occupations.			Persons, including children of all ages.		
	Inhabited.	Number of Families.	Building.	Empty.	Farmers, &c.	Traders, &c.	Others not in 2 last classes.	Males.	Females.	Total No. of Persons.
Argam	3	3			3			11	9	20
Bempton	55	55		2	45	6	4	130	111	241
Bessingby	17	17		1	9		8	39	43	82
Binnington	6	6			6			27	23	50
Boynton	16	16			46	16	47	53	56	109
Bridlington	849	855		20	30	284	541	1706	2035	3741
Brigham	18	20			9	1	10	40	44	84
Buckton	26	26			82	9		91	71	162
Burton Agnes	55	60		1	49	9	2	136	131	267
Burton Fleming	54	56			37	11	8	157	143	300
Butterwick	10	14			4	2	8	52	36	88
Carnaby	22	22			108	24		76	56	132
Easton	2	2			24			13	11	24
Filey	124	124		2	17	22	82	270	309	579
Flambrough	141	201		1	25	18	158	361	395	756
Flixton	42	43	2	1	38	5	5	133	111	244
Folkton	26	26			22	2	2	61	57	118
Foston	43	52			33	13	6	126	141	267
Foxholes and Boythorpe	17	21	1	1	6	3	12	68	76	144
Fraisthorpe	12	12			12			44	34	78
Ganton and Brompton	46	48			40	8		131	128	259
Garton	62	62			41	14	7	179	154	333
Gembling	15	15			14	1		35	34	69
Gransmoor	9	13		1	11		2	43	30	73
Grindall	14	14	1		14			42	27	69
Haisthorpe	17	17			15	2		65	46	111
Harpham	41	41			22	19		101	102	203
Hilderthorpe and Wilsthorpe	7	7			3	2	2	30	22	52
Hunmanby	179	207	5		144	46	17	456	447	903
Carried forward	1928	2055	9	30	909	517	921	4676	4882	9558

DICKERING—CONTINUED.

Townships.	Houses.				Occupations.			Persons, including children of all ages.		
	Inhabited.	Number of Families.	Building.	Empty.	Farmers, &c.	Traders, &c.	Others not in 2 last classes.	Males.	Females.	Total No. of Persons.
Brought forward	1928	2055	9	30	909	517	921	4676	4882	9558
Kelk Great	18	20			18		2	42	50	92
Kelk Little	2	2			2			12	7	19
Kilham	160	181	1	2	115	34	32	395	394	789
Langtoft and Cotham ...	53	78			61	11	6	202	166	368
Lowthorpe	24	24			17	4	3	95	76	171
Muston	53	57		2	40	8	9	140	135	275
Nafferton	169	184		1	112	45	27	382	422	804
Righton............	32	35	1	1	29	3	3	84	91	175
Rudston	60	63			11	12	40	216	159	375
Ruston Parva	20	20		1	17	2	1	63	50	113
Sewerby	59	57		2	10	4	41	125	123	248
Speeton	20	20			55		14	69	58	127
Staxton............	33	33	2		31	1	1	90	85	175
Thornholm	15	15			15			46	36	82
Thwing, Octon, Grange, and Wold Cottage	37	51			45	3	3	140	128	268
Wansford	63	63		2	9	53	1	180	188	368
Willerby	5	5			5			23	19	42
Wold Newton, and Fordon	26	34			10	8	16	118	80	198
Total	2777	2997	13	41	1511	705	1120	7098	7149	14247

BUCKROSE.

	Houses.				Occupations.			Persons, including children of all ages.		
Towuships.	Inhabited.	Number of Families.	Building.	Empty.	Farmers, &c.	Traders, &c.	Others not in 2 last classes.	Males.	Females.	Total No. of Persons.
Acklam, and Barthorpe ...	65	65			52	12	1	161	149	310
Birdsall	39	39		3	36	3		120	122	242
Bugthorpe	46	47		3	35	12		133	127	260
Burythorpe	41	41			33	7	1	98	104	202
Cowlam	2	2			2			23	5	28
Duggleby	13	18		2	14	4		60	42	102
Eddlethorpe	8	8			5		3	35	20	55
Fimber	20	22			21	1		57	49	106
Firby	8	8			6	1	1	31	25	56
Fridaythorpe	23	34			28	6		105	75	180
Grimston North	15	24			15	2	7	65	61	126
Helperthorpe	21	21			19	2		82	55	137
Heslerton East ...	34	34	1		31	3		100	94	194
Heslerton West...	42	42			39	3		124	122	246
Howsham	45	45			29	9	7	101	127	228
Kennythorpe......	12	12			9	3		25	34	59
KirbyGrindalythe	14	23			23			99	67	166
Kirby Underdale	39	42		1	38	3	1	162	131	293
Kirkham	3	3	2	1	3			8	6	14
Knapton	26	26			26			87	89	176
Langton	43	43	1	2	38	5		105	128	233
Leavening.........	47	47		1	37	10		120	105	225
Leppington	22	22			21	1		62	55	117
Luttons Ambo ..	47	51		2	40	8	3	137	117	254
Menithorpe	24	24			23	1		49	71	120
Norton, Sutton, and Welham	201	201	1	1	88	76	37	415	434	849
Carried forward	900	944	5	16	711	172	61	2564	2414	4978

BUCKROSE—CONTINUED.

	Houses.				Occupations.			Persons, including children of all ages.		
Townships.	Inhabited.	Number of Families.	Building.	Empty.	Farmers, &c.	Traders, &c.	Others not in 2 last classes.	Males.	Females.	Total No. of Persons.
Brought forward	900	944	5	16	711	172	61	2564	2414	4978
Rillington	100	121	1	5	107	14		270	291	561
Scagglethorpe	45	45		2	41	4		102	117	219
Scampston	36	36		1	29	7		89	91	180
Scrayingham	27	27			19	4	4	76	62	138
Settrington	83	87	2		65	20	2	259	251	510
Sherburn	82	85			72	13		209	196	405
Skirpenbeck	28	30	2		22	8		94	91	185
Sledmere and Croom ...	54	57			41	13	3	224	164	388
Thirkleby	4	6			6			22	21	43
Thixendale	25	31		1	26	5		125	81	206
Thorp Basset	24	26		2	25	1		82	70	152
Towthorpe	5	6			6			37	18	55
Weaverthorpe	51	56			50	5	6	142	134	276
Westow	69	70			61	8	1	191	178	369
Wetwang	43	57		2	50	7		156	139	295
Wharram-le-Street	17	17		1	17			67	47	114
Wharram Percy	4	4			4			26	16	42
Winteringham, Newton, and Linton	48	48		1	38	10		173	128	301
Yeddingham	12	12			8	3	1	49	43	92
Total	1657	1765	10	31	1398	294	78	4957	4552	9509

BEVERLEY CUM MEMBRIS.

	Houses.				Occupations.			Persons, including children of all ages.		
	Inhabited.	Number of Families.	Building.	Empty.	Farmers, &c.	Traders, &c.	Others not in 2 last classes.	Males.	Females.	Total No. of Persons.
St. Mary	614	691	3	16	52	424	215	1277	1641	2918
St. Martin	605	704	3	29	40	219	445	1172	1467	2639
St. Nicholas	105	125	1	6	21	54	50	220	258	478
Woodmansey cum Beverley Port	51	53		3	53			136	126	262
Tickton, &c.	22	22			22			59	60	119
Weel	20	20		1	20			55	51	106
Molescroft	16	16			14	1	1	47	51	98
Thearne	16	16			14	1	1	42	39	81
Storkhill and Sandholme	8	8		1	5	3		16	14	30
Total	1457	1655	7	56	241	702	712	3024	3707	6731

TOWN AND COUNTY OF KINGSTON-UPON-HULL.

	Houses.				Occupations.			Persons, including children of all ages.		
	Inhabited.	Number of Familes.	Building.	Empty.	Farmers, &c.	Traders, &c.	Others not in 2 last classes.	Males.	Females.	Total No. of Persons.
Humber Ward ...	459	728	3	10	2	298	428	1271	1680	2951
Austin	368	591	1	14		255	336	985	1285	2270
Trinity Ward—First Part	225	327		12	1	104	222	546	742	1288
Trinity Ward—Second Part	151	251		11		154	97	494	538	1032
White Friar Ward	333	475		25		317	158	1033	1366	2399
Saint Mary's	496	870		3		269	601	1552	1696	3248
North Ward	568	782	1	28		561	221	1359	1704	3063
Myton—South Division	806	1015		124	26	284	705	1857	2297	4154
Myton—North Division	760	975		68	15	273	687	1696	2198	3894
Anlaby	51	59	1	2	37	12	10	137	134	271
Hessle	194	211	2	3	70	43	98	488	496	984
Ferriby	49	61			35	8	18	161	154	315
Swanland	52	81		3	45	13	23	178	199	377
Kirk Ella	47	53			26	15	12	123	149	272
West Ella	20	22		1	21		1	49	54	103
Willerby	32	40		2	27	2	11	69	102	171
Total	4611	6541	8	306	305	2608	3628	11998	14794	26792

EAST RIDING COLLECTED.

	Houses.				Occupations.			Persons, including children of all ages.		
	Inhabited.	Number of Families.	Building.	Empty.	Farmers, &c.	Traders, &c.	Others not in 2 last classes.	Males.	Females.	Total No. of Persons.
South Holderness	1084	1184	3	13	783	252	149	3053	2935	5988
Middle Holderness	2080	2338	10	55	923	646	774	5208	5464	10672
North Holderness	1255	1374	4	18	972	254	148	3414	3284	6698
Howdenshire	1257	1477	3	34	881	462	134	3267	3443	6710
Hunsley Beacon	3407	3841	18	147	1563	1986	708	7884	9068	16952
Bainton Beacon	1249	1343	8	25	805	330	214	3370	3133	6503
Holme Beacon ...	1391	1543	8	17	1062	300	181	3831	3654	7485
Wilton Beacon ...	1048	1133	2	30	727	306	100	2647	2702	5349
Ouse and Derwent	1204	1362	7	25	964	212	186	3364	3366	6730
Dickering	2777	2997	13	41	1511	705	1120	7098	7149	14247
Buckrose	1657	1765	10	31	1398	294	78	4957	4552	9509
Beverley cum Membris	1457	1657	7	56	241	702	712	3024	3707	6731
Hull and County	4611	6541	8	306	305	2608	3628	11998	14794	26792
Total............	24477	28555	101	798	12135	9057	8132	63115	67251	130366

On comparing the foregoing tables with the abstract of the returns of 1801 (Chap. XV. sect. 8.) it will be seen, that in the course of the last ten years the population of the East-Riding has acquired the astonishing augmentation of 20,963, or nearly one-fifth of it's previous amount, if the former returns were accurately taken, which, from some circumstances, there is reason for doubting.

But though the whole population has increased about one-fifth, the excess of females above the males is nearly doubled, it now amounting to 4136. Taking the excess indeed of male births, as usually estimated at one in twenty-five, there is now a deficiency of males of 9350.

The relative proportions of males and females in the different Wapontakes and Divisions have, in some degree, changed since the former return; not, however, so as to destroy the conclusions drawn from it, as the principal part of the excess of females occurs in Hull, Beverley, Howdenshire, and Hunsley Beacon lying between the three. A decrease of population to the amount of 2724 has taken place in the town and county of Hull since the former return. This can scarcely be accounted for, except by the decay of trade, which has not been in a flourishing state for some time past: if, therefore, the East-Riding be taken, exclusive in both instances of the Town and County of Hull, the real increase is 23,687 upon 79,887, 79,887, or upward of one-fourth, thus corroborating, in the strongest manner, the remarks before made of the favourableness of a country life to health and population.

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FINIS.

From the Office of
THOMAS WILSON and SON,
High-Ousegate, York.

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